# The Journal of the Michigan State Medical Society

PUBLISHED UNDER THE DIRECTION OF THE COUNCIL

VOL. IV

1

DETROIT, MICHIGAN, DECEMBER, 1905

No. 12

#### Original Articles

## OVERLOOKED ANOMALIES OF THE EYE WITH PRONOUNCED NERVOUS REFLEXES.\*

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It is not my purpose, at this time, to undertake an exhaustive study of the nervous reflexes of the eye, and the consequent functional disturbances caused thereby. We readily appreciate the effect on the general nervous system of an harmonious action of this complicated visual apparatus, and, conversely, the long series of nervous reflexes that necessarily follow when this visual harmony is upset. The important problem for us is to determine by systematic search the exact cause of secondary disorders. We may make our classification of disease as complete and precise as we please, and, at the same time, fail to understand the fundamental causes or primary conditions that serve as the exciting factor in these reflex neryous disturbances.

Our aim must be to differentiate between primary disease and secondary affection. In the former case, we look for some pathological condition, that has been caused by some outside influence acting directly on the parts involved in the diseased process, and so producing a consequent impairment of function; while in the latter class of cases, the symptoms are indicative of a primary lesion or anomaly somewhere in the body and very often at a remote point. These disorders, and, particularly, those of a reflex nervous nature, I wish to present briefly at this time by the consideration of cases that have come under my own personal observation. In all these instances, the functional irregularities were due, without exception, to anomalies of the eye.

The principal feature of interest in regard to these cases is, that the patient, while suffering annoying nervous symptoms in various parts of the body, regarded the local disorders of the eye as too insignificant to have any influence whatever on the nervous manifestations in other regions; so, the eye affection was allowed to go wholly overlooked for a time, or, at least, until the family physician had exhausted all his resources in the vain endeavor to give relief to his patient. Positive proof of the intimate relation existing between the eye and the

<sup>\*</sup>Read before the Michigan State Medical Society at its annual meeting at Petoskey, 1905.

general nervous system is shown by the prompt disappearance of all reflex nervous disturbances, simply on correcting the visual error.

Every oculist has, almost daily, patients troubled with all sorts of afflictions and subject to various nervous and functional disorders; who have suffered for years with headache, dizziness, nausea, and vomiting. In this number are found not only laborers and shop girls but people of education and culture as well. They go for years with pain in the head and annoyed by many reflex disturbances of a nervous nature. And, because the eye symptoms are so slight as to escape attention entirely, they have not the slightest idea that their whole ailment is caused by defective vision. So, they wear no glasses but the muscles of accommodation must be kept in a state of extreme and constant tension. In other words, some people have marked defective accommodation but do not know it, since the eyes in themselves cause no discomfort. manage easily enough, by persistent will power, to see; but, nevertheless, the ocular muscles are subjected to great strain.

As a consequence of this continued eye-strain there follow a long series of nervous reflexes, as, for example, Nystagmus, Epilepsy, Chorea, Blephrospasm, Strabismus, Nervous Prostration, and Absentmindedness; in young children a peculiar twitching of the ocular muscles, and in young girls suppressed and irregular menstruation. I wish in this connection to have it understood that we also have these nervous reflexes in cases where the eye symptoms are clearly defined and the visual error manifest from the start.

As the most pronounced symptoms of

eye-strain we have headache, gastric disturbance, and dizziness. In headache, the exact location of the pain varies. Often it is frontal or temporal and, in nervous people, may involve the entire head and the back of the neck. Some patients claim that it is constant and remark: "There is never a moment in my life that I am free from headache." In other instances, the pain comes on only after exertion or close application of the eyes; but generally moderate pain is continuous, becoming more pronounced by work.

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Some writers claim that hemicrania. the typical sick headache, is due to refractive anomalies or to eye-strain alone. Dr. Inglis, of Detroit, in the discussion of a paper read before this section at Lansing in 1894 said, in regard to the "Causation of Certain Forms of Headache," "The longer my experience, the more am I inclined to regard eye-strain as the most frequent cause of the so-called sick or nervous headache." To a certain degree this statement has been verified in my own experience. But, I consider that there is a definite neurosis, aside from all ocular symptoms, that serves as the principal etiological factor in these cases; while I regard eye-strain as a minor influence in bringing on an attack of true migraine. I am frank to state that these views do not meet with the entire approval of many prominent ophthalmologists throughout the country, since some believe, in at least 90 per cent. of cases, that migraine is caused by refractive error alone and may be cured by properly adjusted glasses. I am pleased to note that Dr. Casey A. Wood, of Chicago, is now making an exhaustive study of this disease; and, undoubtedly his findings will be of inestimable value to the profession. In his own words he says: "It will at least be of interest to know whether these cases belong in the province of the Oculist or that of the General Practitioner."

When subject to dizziness, which is a common result of eye-strain, and often associated with headache, the patient complains of a dazed feeling, and concentration of thought and sight are difficult. Gastric disturbance, when present, produces a feeling of nausea. In regard to cases of this kind, I may state that the physician generally inquires, by way of diagnosis, if the patient has any defects of vision; and, being assured that sight is as good as ever, naturally concludes that there is no trouble with the eyes. To illustrate the beneficial effect of simple correction for eye-strain on nervous disorders, I will mention the following cases:

Case 1. Florence D., age 16, of healthy parents.

History—Says she never enjoyed perfect health and complains of continual pain in the occipital region, together with feelings of dizziness and nausea; states she is absent-minded, cannot study, and so has found it difficult to keep up her school work, as also her music. Has been growing worse the past two years, or since the commencement of her menstruation, which has been painful and irregular. The attending physician, supposing her case to be one of simple menstrual disturbance, directed his treatment toward that end.

Examination: V-O.D.=20/50. O.S. =20/40. With the exception of an oval nerve with indistinct outline, the fundus was practically normal. Muscle test was negative. Without cyclopegic she readily accepted in O.D. C-D 1.25 ax 1.50 and O.S. C-D 1.25ax180. These glasses

were worn from the first without any particular discomfort. The improvement was prompt and decided. Her headache, nausea, and general nervousness subsided and her menstruation became normal. In six months' time she called herself perfectly well. Her physician said to me afterward: "It was wonderful to see how this girl improved simply by giving. her a pair of glasses."

Case 2. Rev. J. R. D., age 26.

History—Has always been a diligent student; complains of headache, dizziness, and a sense of nervous prostration, so accomplishes his literary work with great effort. Says he has been treated for nervous prostration and insomnia, but with little benefit. Adds that he always improves during the summer vacation, but in the fall, on resuming his pastoral labors and literary work, soon falls into the state above mentioned. Has recently experienced a new symptom, that of double vision, which alarmed him and led to an examination of his eyes.

Examination—Under Hyocein Hydrobromid V=O.D.20/50, O.S.20/70. He accepted O.D. C-D1.50ax22. O.S. C-D 2ax135. These glasses were worn without discomfort and in a few weeks he started for the Pacific Coast. A letter, written soon after reaching California, will explain his improved health. He said: "The sight of mountains, and plains, the sea, and cities, with the fragrance and beauty of flowers, are all the more beautiful, because of what science through you has done for me. I wear my glasses all the time, except when I sleep, and feel that I am well and certainly a happy man once more."

An example of marked nervous reflex disturbances caused by eye-strain, is chorea—a disease frequently relegated to the class of incurables, failing even of slight improvement under the best known methods of medical treatment. I think that every oculist present will, without doubt, agree with me, that the peripheral reflex irritation occasioned by this discase may, after thorough investigation, be attributed in at least 90 per cent. of cases, to overlooked anomalies of the eye. It has been my good fortune in the past to have had several of the apparently hopeless cases, in which no relief had been previously obtained even after exhausting all ordinary forms of treatment. I think I am perfectly safe in making the somewhat surprising statement that the majority of the leading neurologists and pathologists of today are agreed that chorea is essentially a microbe disease. To substantiate this statement I quote from a reputable author in the American Journal of Medical Sciences. He says: "The more recent studies of the pathology of chorea have led to a practically unanimous conclusion, that the seat of the disease is primarily in the blood-vessels and in the blood, with secondary degenerative changes in the parenchyma; and, that the cause is either some microbe or toxic substance, or both." In view of the above statement, I think that oculists in general should carefully investigate these cases, correct the eye-strain and report their findings and results. Such a course would undoubtedly have a salutary effect in influencing the conclusions to be drawn by neurologists in regard to this disease; and, as a result, also be of great practical value to the intelligent practitioner as well. I wish to emphasize the one fact that "eye-strain may exist without symptoms referable to the eyes themselves of which the patient is conscious." This being true, it is easy

enough to attribute the whole cause of chorea to functional disturbance in the gastro-intestinal tract or in the cerebrospinal nervous system.

I have in numerous instances had cases in which treatment with drugs was employed for months without affording any appreciable relief from the distressing spasmodic contortions. In all these instances, strychnine, chloral, bromides, cold-packs, Cod-liver oil, arsenic, and electricity, and the like were used to no avail. Prompt and noticeable benefit followed immediately on the proper correction of the eye-strain. In this connection, I wish to report a few typical cases in proof of what I have just said.

Case III. Miss C., 16 years of age.

History-Of healthy parents; first noticed an unsteady movement of her arms and facial muscles two years ago. also that she was inclined to knock things When in company she was very much embarrassed, and likewise unsteadiness in walking was manifest. Her menstruation had always been normal and digestion perfect. The last six months previous to consulting me were attended with a rapid increase in all her previous reflex nervous symptoms. had been carefully treated by her family physician but with no apparent relief. Her parents, having heard of similar distressing symptoms which were remedied by glasses, decided to try a like expedient.

Eye examination—Without cyclopegic V=20/22. On muscle test 4 degrees of Esophoria. Circumduction, right eye 3 degrees, left eye 4 degrees. No Hyperphoria. Under Hyocein Hydrobromid V=O.D.20/40. O.S.20/30, with 4 degrees of Esophoria. There was no other change from the above muscle test. Ophthalmometer showed a high degree of

Hypermetropic Astigmatism. She accepted +D1.=C+D1.ax90 degrees, and wore same with perfect ease. Two months later, finding that her nervous symptoms were not entirely relieved, I performed a graduated tenotomy; and, subsequently, increased her spherical lenses to +D1.50=C+D1.ax90 degrees. Immediate improvement was manifest and from all appearances she is now perfectly well.

Case IV. Mr. J. C., age 27, by occupation a book-keeper.

*History*—Mother had myopia. His father and two brothers, all subject to headache, were finally relieved by glasses.

Stated that he had always been subject to headache and had worn glasses +D1.00 for the past six years. One year ago first noticed a feeling of nervous prostration, together with a peculiar twitching of the facial muscles and a contortion of the arms. Walking and talking were both tiresome and difficult. Had been under the care of a competent physician all this time, but with little if any Thought the choreic symptoms were rapidly growing worse. There was no evidence of organic disease, and the sensations of touch as also the power of individual muscles seemed normal. With an apparent tendency toward growing rapidly worse, the prospects of recovery under any treatment seemed doubtful and discouraging.

Eyè examination—Under Hyocein Hydrobromid O.D. V=20/50. O.S. V=20/70. Ophthalmometer showed a high degree of Hypermetropic Astigmatism. On muscle test found 7 degrees Esophoria with homonymous Diplopia and but little abduction.

Treatment—All drugs were discontinued for one week and a full cyclopegic

effect continued for that time, after which he accepted O.D.+D2.=C+ O. S. + D 2. = C +D  $3.50 \text{ ax } 135^{\circ}$ . D3. $ax60^{\circ}$ . V=20/20. He wore these glasses with but little discomfort and there was noticed at once a decided improvement. He slept better and gradually all twitching of muscles of face and extremities subsided. In six months his condition was such that he called himself perfectly cured. There being 7 degrees of Esophoria, and an apparent lack of co-ordination in the action of ocular muscles, and still but slight abduction, I performed a graduated tenotomy on the Internal Recti Muscles, after which recovery was speedy; and, now, three years after treatment, he is enjoying perfect health. Removal of glasses for any considerable time causes him immediate discomfort.

I would be pleased to report other cases of marked choreic symptoms in connection with eye-strain, but time forbids. I will, however, mention a case of "chronic gastric intestinal disturbance," that was entirely cured by the simple correction of the eye-strain, after having resisted all forms of drug treatment for nine years.

Case V. Mrs. A. R. P., age 27.

History—During the past nine years has been subject to repeated and severe attacks of indigestion and fainting spells, lasting from three days to three weeks; which, at times, were so aggravated that she would be materially reduced in flesh. Had never felt the need of glasses, as she could see near by and at a distance with perfect ease. But, she admitted experiencing a sense of dizziness and nausea after using her eyes for a time at close work.

She never for a moment attributed the cause of her trouble to her eyes.

examination—Under Hyocein Hydrobromid, O.D. V=20/XL. O.S. V=20/XL. Abduction 24 degrees, abduction 5 degrees. No hyperphoria, no esophoria. Glasses given: O.D.+D1.50 =C-D3.ax180°. O.S.+D2=C-D3.50 ax180°. From the first, the improvement in her condition was marked and continuous; and now, after having worn the glasses for one year, she is feeling so well she does not consider it necessary to return for an examination of her eyes. Her previous chronic constipation and gastro-intestinal disturbance entirely disappeared and she enjoys perfect health. It would be interesting to give the report of several cases of epilepsy cured by the correction of eye-strain alone; but the time alloted for this paper forbids.

In conclusion, I wish to emphasize the fact that the field of the oculist is necessarily a large one. The more we study the complex mechanism of the eye and its reflexts, the greater will be the benefit to suffering humanity. From this country and from across the water comes abundant and confirmatory evidence. showing, without a shadow of a doubt, that defects of the eye and eye muscles do constitute an important factor in the 'causation of many forms of obscure nervous diseases; that this fact is being recognized by the great body of general practitioners; and, finally, that the diagnosis of a great per cent. of diseases is radically incomplete without a most thorough examination of the eyes.

#### A CASE OF LATE, POSTERIOR, MESOMETRIC PREGNANCY.\*

H. W. LONGYEAR, Detroit.

The definite causes of the occurrence of pregnancy outside the uterine cavity are not well understood, and apparently rest entirely on theoretic grounds, as the following opinions demonstrate:

Roberts says it may be due to a want of development of the Fallopian tube, or its permanent contraction, any swelling of its mucous membranes, or to an abnormal length of the tube; or it may be caused by an extra weight or impaired motility of the ovum at its entrance to the tube, or to any interference with the peristaltic action of the tube—if this be needed—for propulsion of the ovum.

Webster also believes the oösperm may be arrested by a swelling of the mucosa, which simulates a decidua.

Tait, who was the pioneer of discovery

to open up this field of pathologic research, urged inflammation and granulation as a cause, but most recent observers have contradicted this point.

Taylor and Bland Sutton report failure to find this condition a factor, and claim that salpingitis and the occlusion of the tubes, especially in gonorrhœa and the associated sterility, argue against Tait's theory; in fact, a healthy tube is more likely to become pregnant than an inflamed one. It seems to the writer that these objections to Tait's theory are hardly tenable, as his idea was not that an inflamed tube became pregnant, but that a tube which had recovered from an inflammatory process, having its physiological functions crippled, becomes pregnant after its lumen has been partially restored—the spermatozoa find entrance but the ovum is obstructed in its passage and so develops in the tube.

<sup>\*</sup>Read before the Michigan State Medical Society at its annual meeting at Petoskey, 1905.

In a large number of cases, however, no history of previous disease can be elicited and no active pathological condition of the tube found to indicate the cause, so that in a large percentage of these cases the cause remains undetected and unexplained. The fact that many cases have had years of sterility previous to the tubal pregnancy would tend to corroborate Tait's theory.

Classification. There is probably one great variety (Bland Sutton), viz: Tubal; but of late there is increasing evidence of the occurrence of primary ovarian pregnancy (Roberts, Lancet, Jan. 12, 1901, pp. 100, 101). Martin, Sawyer and Leopold have reported such cases and Roberts gives two authentic cases. This variety is, however, of such extreme rarity, as compared with the tubal, that many operators of large experience have never seen one.

In the tubal variety the chorionic villi grow into the swollen mucosa, and as the ovum expands, the tube is progressively attenuated by distension, and very little attempt at compensatory hypertrophy is manifest, which explains the inevitable rupture or abortion of a living tubal pregnancy during the first four months of its existence. In many cases the abdominal ostium remains wide open, which is an important factor in its relation to tubal abortion and the leaking of blood from it causing the blood drip which, being gradual and without violent symptoms, frequently produces a pelvic hematocele of apparently obscure origin.

With the advancement of the pregnancy in the tube the uterus increases in size and the decidual membrane forms within its cavity. The discharge of this membrane, which usually occurs with the death of the ovum, and usually at the time of the rupture of the tube, is of much diagnostic value. In cases which go to the full term where the fœtus is retained in the abdomen for a time after its death, the decidua will be shed at the time of the death. The decidua may be a perfect cast of the uterine cavity with three openings, with a rough outer aspect, while its inner surface will be smoother and dotted with the orifices of the uterine glands. So far as known, a decidua never forms in the tubes or cervical canal. Its detachment begins at the os internum. The membrane 'consists of decidual, i. e., uterine connective tissue cells, and in the first month is twofifths inch thick, fleshy, ovoid and vascular. It can hardly be compared with the thin, delicate cast of the uterus in membranous dysmenorrhœa, which averages one-twenty-fifth to one-twelfth inch in thickness (Champneys). Any membrane approaching one-fourth inch thick cannot be a dysmenorrhœal membrane unless additionally diseased. length of the sac in dysmenorrhoea is only 13/4 to 2 inches, while in ectopic abortion, sacs are much longer.

Rupture of the pregnant tube. If early rupture does not takes place, late rupture is sure to. The limit is usually between the sixth and twelfth weeks, although in the interstitial variety rupture may not occur earlier than the sixteenth week.

\* The direction of rupture may be upward into the peritoneal cavity, or downward into the cellular tissue of the broad ligament.

Rupture upward into the peritoneum. This may or may not be accompanied by severe hemorrhage, much depends on the extent of separation of the placenta from the tube during the process of extrusion.

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In those instances where the placenta retains its connection with the tube, and the hemorrhage is only moderate, the foetus will continue to grow in its new position in the abdominal cavity. Whether much or little blood flows into the peritoneal cavity from such a rupture, there will be no distinct tumor formed by it, the fluid being unrestrained and loose in the cavity, giving the same signs on examination as ascites.

A rupture is always attended with sudden pain and faintness, the symptoms being in proportion to the extent of hemorrhage.

Tubo-ligamentary, or broad ligament, or mesometric pregnancy.—This occurs as a secondary invasion of the ligament and subperitoneal tissues by the downward rupture of the tube, which, according to some authorities (Bland Sutton, Allburt, Playfair) can only occur at its middle portion. This is accompanied by a hematoma and may end the life of the conception and absorption take place, or the pregnancy may continue in this situation.

The hematoma of the broad ligament is sudden in onset, distinctly lateral, tense and fixed, situated very low in the pelvis and frequently passing in front of the rectum, causing tenesmus.

Further course of tubo-ligamentary pregnancy. After rupture downward the foetus may continue to grow beneath the peritoneum in a sac formed by the expanding layers of the broad ligament, the pregnancy being roofed in as well by the expanded ruptured tube, to which the placenta is still attached.

The progressive displacement of the peritoneum, as the foetus develops, is a constant menace to the placenta, so that secondary ruptures are liable to occur,

ending in death of the foetus, or the formation of an abdominal pregnancy, the foetus passing through the rent into the peritoneal cavity. The ligamentary pregnancy may be either posterior or anterior, the situation depending on the direction of the development of the pregnancy. In either case the peritoneum is stripped up from its attachments and forms one side of the retaining cavity in which the foetus is growing. The postligamentary is the most common (Dunning), and in these cases the peritoneum is raised upward from the posterior pelvic wall and rectum as far as the sacral promontory, the anterior portion being undisturbed; thus the tumor looks like a pseudo-uterus at operation until its posterior relations are explored.

The displacement of the placenta is at times remarkable. In tubo-ligamentary pregnancy it usually lies close to the child. It is often poorly developed and so acts as an inefficient respiratory organ, causing an illy formed foetus. The placenta is mainly if not entirely formed of foetal tissue and there is no true decidua serotina.

Interstitial pregnancy is liable to go longer without rupture than the purely tubal, but it rarely exceeds the fourth month. The reason for this is doubtless the protection to this portion of the tube by its enveloping uterine tissue. The resulting hemorrhage is the most violent and dangerous. Rupture into the uterine cavity is considered improbable.

Cases of long retention of the dead foetus are recorded. Over a dozen are reported of over twenty years, and three of over fifty years. (Cheston.) After the death of the foetus the liquor amnii is absorbed; the placenta at first increases in size, but later decreases, owing to degenerative changes (Knowleley Thornton), and is ultimately absorbed. Finally contraction of the sac takes place, lime salts are deposited; or a fatty change may occur with the production of adipocere (B. Sutton), and at last the skeleton only will remain. Decomposition, suppuration and toxemia may occur and parts of the foetus ulcerate through the walls of the rectum, bladder or uterus, where unprotected by the stripping away of the peritoneal covering.

Owing to the near relationship of the rectum to the sac, in cases of late posterior mesometric pregnancy they are the most liable to become septic and putrid (Taylor). The following case is an excellent illustration of the latter:

Mrs. M., age 36, married 14 years. Had an attack of pelvic inflammation when a young woman. Had one miscarriage at four months, thirteen years ago, which was her only pregnancy until October, 1903, when the cessation of menstruation indicated the beginning of this pregnancy. Nothing unusual was observed in its progress until about the end of the third month, when she was seized with severe pains in the abdomen, and fainted three times. Dr. McHugh, who was called, reports a large quantity of albumin in the urine at this time.

She was confined to her bed for several days after this attack, but after recovering sufficiently to be up she had constant pain in the pubic region, which was worse on the right side and radiated down the thigh of that side (Roberts). These pains were all increased for two or three days every 28 days thereafter.

Foetal movements were felt at about the last of the fourth or beginning of the fifth month, which were very marked and somewhat painful (characteristic of ligamentous pregnancy). Her breasts increased in size and milk was noticed, about the usual morning nausea was observed and the abdomen increased progressively in size until about one week before the expected date of confinement (July 28, 1904). She was taken with vomiting, pain, fever, faintness, etc., and added to these symptoms were those of enteritis, as reported by her attending physician. She was confined to her bed with this attack for several weeks, after which she became quite well, going about as usual and doing her housework. The abdomen decreased gradually in size and the movements of the child became weaker and weaker and gradually ceased Four weeks after this attack her menses appeared and with the flow there appeared, from time to time, large shreds of membrane-the gradual shedding of the decidua. The breasts decreased in size and the milk disappeared.

The patient continued to feel well for nearly nine months after this severe attack, when her menses became continuous and symptoms of enteric irritation developed, accompanied by a constant rise of temperature of from one to two degrees.

This was the condition of the patient when first seen by the writer, March 8th, 1905. The abdomen was distended by a firm tumor of about the size of a seven month's pregnancy. The mass was slightly movable and hardest at its right lower aspect. The cervix uteri could be felt high up under the pubic arch, at the patient's left, but the fundus could not be satisfactorily palpated. A diagnosis of late extra-uterine pregnancy with death of foetus was made, and operation advised.

Operation at Harper Hospital March

18, 1905. Temperature 102.5°. Tumor tympanitic, while it had been dull on percussion before this date. On opening the abdomen the tumor was found covered by the adherent omentum, which was torn through and pushed away only far enough to leave sufficient field for packing a protecting wall of gauze around the intended incision. After completely encircling the bared portion of the tumor, which much resembled a pregnant uterus, with large veinous sinuses coursing over its surface, it was incised in the median line. Considerable thick, greenish, foulsmelling pus was blown, by the imprisoned gas, through the opening, which was rapidly enlarged sufficiently to allow of the extraction of the child, which was covered with pus and debris, closely doubled into a compact mass with the head lying in the right side of the pelvic cavity. On removal the cord was found to have been absorbed, and the placenta, a small round ball, was detached and loose in the cavity. The site of attachment of the placenta was plainly apparent -a rough surface about two inches in diameter, covered with grayish, sloughing shreds of tissue, and situated at the uppermost part of the cavity. The sacrum could be seen at the back of the cavity and its surface felt rough and apparently bare of peritoneum. The shreds of grayish, sloughing tissue which appeared on all parts of the inner aspect of the sac, were stripped away where loose and left where they were found to be closely adherent, as it was found removal of the latter caused hemorrhage. After the ligation of the only bleeding pointa large vein at the lower end of the sac incision, a counter-opening was made through the posterior cul-de-sac in the vagina, and a large rubber drainage tube

drawn through it. The cavity was then very thoroughly flushed and scrubbed with a saturated solution of acetozone, the packing around the sac opening removed and replaced by three Miculitz drains, placed between this pseudo uterine wall and the abdominal wall, two rubber tubes placed in the sac, one reaching the upper and one the lower part of the cavity, and both brought out at the lower end of the abdominal incision beside the tube which passed through into the vagina. After partially filling the cavity with strips of iodoform gauze, which were brought out beside the tubes, the upper end of the abdominal incision was closed with four silkworm gut sutures, and the usual dressing applied. A large rubber catheter was also placed through the anus into the rectum, as a rectal communication with the sac was apparent from the previous symptoms, though not demonstrated at the operation.

On examination of the child the bones of the skull were found protruding through the scalp and one foot had sloughed off. This foot was not found. The recovery of the patient was ideal in every respect. The gauze in the sac was removed on the third day and the Miculitz drains on the fifth. The large drainage tubes permitted of free flushing of the cavity, which was done frequently about every six hours for the first few days-bringing away large quantities of sloughing debris. The communication between rectum, vagina and sac were very free, the fluid using passing either way. Two of the drainage tubes were removed by the fourteenth day, leaving only the long one passing through sac and vagina, which did service until the end of the sixth week, when it was removed, as no more debris could be

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washed through it and very little pus was in evidence. The treatment of the rectum was the same as for the sac—thorough frequent flushing—for two weeks, after which constipation was encouraged, soon after which the evidences of communication became less and less, so that when discharged from the hospital, April 20th, 1905, the fistula had apparently healed. This, however, had not become very firm, as the patient, contrary to explicit instructions, took a cathartic a few days after going home, and reported a reopening of the abdominal sinus and passage of gas through it.

(Nov. 2, 1905, patient well and fistula closed for four months.)

## INTESTINAL ANTISEPSIS—REPORT ON A SERIES OF EXPERIMENTS ON ANIMALS.\*

S. EDWARD SANDERSON,
Detroit.

Time does not permit me in this paper to go into a comprehensive discussion of the subject. The purposes of this paper are to report a series of experiments carried on by the author in an endeavor to gain some positive data. What do we mean by intestinal antiseptics? What are we striving to do when we employ them, or what do we hope to accomplish? Can we produce an amicrobic condition of the alimentary tract? Positive knowledge on this subject is scarce and our practice depends largely on empiricism. What positive knowledge can we expect to gain in this field, and how shall we go about the task of obtaining it?

In 1904 I began a series of experiments. The substances to be tested were such standard drugs as salol, resorcin, the sulphocarbolates, petrolatum, guaiacol, etc., and the newer drugs. The claims made of the value of benzoyl-acetyl-peroxide (Acetozone), as set forth by Novy and Freer, in the publication of their researches, seemed to place it as the most potent drug in the field. For that reason I endeavored to give it the first test.

The following outlines the series of tests:

#### CONTROL.

I. The determination of the toxicity or innocuousness of the drug employed.

II. Determining the prevalence of bacteria in the intestine where no drug had been used.

#### TESTS.

I. Having given an animal certain doses of medicine for several days, cultures were taken from many points in its intestinal canal. Under surgical methods the openings made in the intestine were closed and the animal allowed to live.

II. The same animal was later treated with a different drug, cultures again being taken.

III. The same animal was later allowed to go untreated, cultures then being taken.

The culture media used were slant agar and bouillon. The culture work was done in the Detroit Clinical Laboratory. The tubes were left in the incubator until a full growth appeared or until we were certain no growth would appear. Records were made at the end of 24 hours, 48 hours and 72 hours. In the records

<sup>\*</sup>Read at the annual meeting of the Michigan State Medical Society at Petoskey, 1905.

we endeavored to note the amount of growth, full memoranda being kept of each culture, +5 designating full growth, +4 a lesser amount of growth, +3 still less, etc., and +1 only one or two colonies appearing. No attempt at identification of the bacteria was made.

#### CONTROL.

- I. An ideal intestinal antiseptic should destroy or inhibit the growth of intestinal bacteria, but leave the animal unharmed, both locally and generally. To determine how far this requirement would apply to benzoyl-acetyl-peroxide (Acetozone), the tests were made in various ways:
- 1. The full strength fully hydrolized solution\* was injected subcutaneously into rabbits many times, with no perceptible ill effect.
- 2. The fully hydrolized solution was injected into the peritoneal cavity of rabbits many times, without perceptible ill effects.
- 3. Under an anesthetic, the peritoneal cavity was opened by an incision, and the hydrolized solution poured freely therein, with no perceptible ill effect.
- 4. The heart of a rabbit was exposed by incision, and the hydrolized solution was injected into the cavity of the organ; the heart was replaced, the wound closed, and the animal recovered with no perceptible ill effect. This was done in two animals, only, both living until finally killed. The only evidences observed post-mortem were pericardial adhesions, due doubtless to the surgical procedure.
  - 5. The hydrolized solution was in-

jected into the femoral vein of a dog with no perceptible ill effect.

- 6. The eye of a rabbit was freely washed with the hydrolized solution, with no ill effect.
- 7. Dogs were given large doses of the powder, in capsules (30, 50, 60 grains at one time) with no evidence of irritation of the stomach, at the time or later; and no evidence of irritation of the mucous membrane of the stomach or intestine was found, either at operation or post-mortem, in any case.
- 8. The *fresh* solution was given to dogs, per catheter many times, using one or two pints, with no evidence of irritation.
- 9. The *hydrolized* solution was given to dogs per catheter many times, using one or two pints, with no evidence of irritation.
- 10. The intestine of the dog having been opened, and the mucous membrane exposed under proper surgical methods, the powder was dusted freely upon the mucous membrane with no other effect noticeable than the stimulation of mucous secretion.
- 11. The mucous membrane of the intestine having been exposed, the solution freely poured upon the mucous membrane or into the lumen of the intestine seemed to have no other effect than to stimulate activity of the mucous glands.
- 12. The hydrolized solution seemed to have little or no effect upon a delicate membrane or cut surface, while the powder freely dusted upon the peritoneum or a cut surface seemed to have a decidedly destructive cauterizing effect.
- II. For determining the comparative number of bacteria present in the intestine in untreated conditions when no drug had been employed, ten dogs were used.

<sup>\*</sup>To prepare the full strength fully hydrolized solution 15 grs. was added to one quart of water. This was allowed to stand 24 or 48 hours. According to Novy & Freer's report spoken of above, this equals bichloride of mercury 1:1000 solution in bactericidal strength. In all cases included in this paper this was used unless otherwise stated.

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(For detail see appended table, experiments 18, 20, 21, 48, 50, 58, 59, 60, 61, Cultures were taken from the lumen of the intestine of the living animal in all available states. These include the conditions found when the animal is under full feeding or reduced to starvation or by operation. No test was made in what was considered a diseased condi-The method of procedure in these cases was to prepare the dog for abdominal operation, under an anesthetic and with aseptic precautions. The intestine being exposed, a small incision was made, and a platinum loop was inserted into the lumen of the gut, from which the inoculation was made into the culture medium. The platinum loop being sterilized was again passed into the lumen of the gut and a second culture made, one usually being in agar and one in bouillon. some cases four cultures were made in this way from the same point. When possible a larger incision was made, freely exposing the mucous membrane. culture was taken from the contents of the bowel, such as mucus or partly digested food, or from the bare mucous membrane. We endeavored to distinguish between the bowel contents and the mucous membrane, in order to arrive at a better understanding when possible, of the location of the bacteria present.

Of the ten dogs in this series of tests several had been under full diet; the stomach in some of these cases being found full of food and indigestible matter such as hair, straw, excelsior; the intestines containing considerable matter, fluid or of a creamy consistency, fecal matter being present in the lower portions of the intestinal canal. Other animals had gone several days without food, reducing the amount of matter in the intestinal canal.

tinal canal to mucus, indigestible material and parasites (tape-worm). Fecal matter was often present in the lower Several had been subjected to previous operations, such as intestinal anastomosis, splenectomy, etc. In every case the intestinal contents were reduced to a minimum. Certain of these animals suffered from intestinal obstruction of greater or less degree; the portion below the obstruction being almost absolutely empty of matter, that above being distended. Cultures were taken from all points of the intestinal canal, stomach, duodenum, small intestine, appendix, colon. Almost without exception an abundant growth appeared in all cultures within 24 hours, whether taken from the mucous membrane or from the intestinal contents. The logical deduction would, therefore, be that bacteria are practically universally present in abundant numbers in the normal intestinal canal. We were not aware that any of the dogs from which cultures were taken for this purpose were suffering from an intestinal disease.

#### TESTS.

Two series of tests were made with benzoyl-acetyl-peroxide given internally: (a) In powder form, (b) in solution. In both series cultures were taken from all parts of the intestinal canal in the living animal, under an anesthetic, with aseptic precautions, as in the control series.

(a) Powder given in capsules. Eight dogs were used. (For details see appended table.)

Experiment 31—Dog No. 11. Test insufficient.

Experiment 32—Dog No. 12. Test insufficient.

Experiment 38—Dog No. 11. A total of 200 grains was given in divided doses,

extending over a period of ten days. Food was withheld for four days. The result showed a practically sterile bowel.

Experiment 47—Dog No. 23. A total of 200 grains was given in divided doses, extending over a period of six days. Food was withheld for four days. The result was a practically sterile bowel.

Experiment 65—Dog No. 29. A total of 80 grains was given in divided doses, extending over a period of six days. Food was given all the time. The result was a marked decrease in the number of bacteria.

Experiment 66—Dog No. 28. A total of 130 grains was given in divided doses, extending over a period of eight days. Food was given all the time. The result was a very slight effect.

Experiment 70—Dog No. 27. A total of 70 grains was given in divided doses, extending over a period of seven days. Food was withheld for four days. The result showed no decrease in bacteria.

Experiment 74. Dog No. 28. A total of 300 grains was given in divided doses, extending over a period of ten days. Food was withheld for six or eight days. The result showed no decrease in the number of bacteria.

Of the eight dogs used, two gave a practically sterile small intestine; in one there was a marked decrease in the number of bacteria; in one only a slight decrease and in two there was no evident lessening of the bacteria whatever.

(b) Solution. Six dogs were used.

Solution passed into the stomach through a catheter. Cultures taken as in preceding series. (For details see appended table.)

Experiment 44. Dog No. 22. Was given a total of three litres in divided doses, extending over a period of three

days. Food was given all the time. The result showed an almost sterile bowel.

Experiment 53—Dog No. 26. Was given a total of nine litres in divided doses, extending over a period of nine days. Food was withheld for two days. The result showed no decrease in the number of bacteria.

Experiment 54—Dog No. 23. (Used before. See above experiments 47, 50.) A total of seven litres was given in divided doses, extending over a period of seven days. Food was withheld for one day. The result showed no decrease in the number of bacteria.

Experiment 63—Dog No. 27. (Used before. See above experiment 70.) A total of three litres was given in divided doses, extending over a period of five days. Food was withheld for one day. The result showed a marked decrease in the number of bacteria.

Experiment 71—Dog No. 35. A total of four litres was given in divided doses, extending over a period of five days. Food was withheld for four days. The result showed a marked decrease in the number of bacteria.

Experiment 72—Dog No. 36. A total of five litres was given in divided doses, extending over a period of six days. Food was withheld for six days. The result showed a marked decrease in the number of bacteria.

Of the six dogs used, one gave an almost sterile bowel, three showed marked decrease in bacteria, two showed no evident lessening of the bacteria present.

The incompleteness of this work is evident to no one more than to myself. It is little better than a beginning, teaching a few lessons and pointing the way to many avenues for study and investigation. I had hoped by this time to be able

to report my tests with other drugs, but the work necessary to test one drug to completeness is so tremendous that I have but begun on other drugs.

I believe it possible to markedly inhibit intestinal bacteria. In my series of tests I obtained this result several times. (See Experiments 38, 47, 65, 44, 71, 72.) Why results were not uniform opens up problems which are too comprehensive to be treated here, and which are not fully understood. The drug may be the same, the food the same, and other gross conditions may be alike, yet the identity of the bacteria present may vary. Some may be more resistant than others, no attempt at identification was made. Physiologic conditions may vary: conditions we but little understand. Fecal matter present in the lower bowel, even where food is withheld, seemed to favor the presence of bacteria. A yellow fluid in the intestine seemed to presage bacteria present in numbers. A bowel filled with food products is less easily sterilized than one empty.

It is a safe supposition to make that bacteria are present in all accessible portions of the intestinal canal, in the food stream, upon the surface of the mucous membrane and deep between the villi. I have been unable to find any literature bearing upon the findings of other observers. My own observations lead me to believe the greatest number exists in the food products (as these form the best culture media); and upon the surface of the mucous membrane, few being deep between the villi. In my whole series of tests the untreated bare mucous membrane gave abundant growths; the treated membrane sometimes gave no growths, while the food products in the same animal gave abundant growth. The largest number of bacteria seemed to be present in the lower bowel.

In presenting this paper the author hopes to be able at a later date to report further work in this field.

#### APPENDED TABLE. Control.

	C	ulture			rowth	
	No.	Medium.	Location.	24	48	72
Experiment 18.						
Dog No. 10—						
No preparation. Male fox-ter-	1	A	Stom.			
rier in good condition.	2	A	Small Int.		+1	
	3	A	Appen.		+5	
Experiment 20.						
Dog No. 11—						
No preparation. Male fox-ter-	4	A	Stom.		+3	
rier in good condition.	5	A	Up. small int.			
	6	A	Lower small int.		$+3 \\ +5$	
	7	A	Appen.		+5	
Experiment 21.						
Dog No. 12—						
No preparation. Female fox-	8	A	Small int.		$^{+5}_{+5}$	
terrier in good condition.	9	A	Appen.		+5	
Experiment 48.						
Dog No. 24—						
No food for 4 days. Female	103	A	Muc. duod.		+1	+1
cur, small, in good condition.		B A	Muc. duod.	+5		
	105	A	Muc. stom.	+1	+2	+2

#### EXPERIMENT 48—(Continued)

	-	lture. Medium.	Location.		rowth, Iours, 48	72
	106 107 108 109	B A B A B	Muc. stom. Muc. small int. Muc. small int. Muc. 24 in. lower. Muc. 24 in. lower.	+3 +4 +5 +5 +5	$^{+5}_{+5}$	
Experiment 50.						
Dog No. 23—						
(See Exp. 47.)		B B B B B	Small int.	 +5 +4  +4		
Experiment 58.						
Dog No. 30—						
		B A B A B	Duod. Duod. 20 in. lower 20 in. lower Near appen. Near appen.	+5 +5 +5 +5 +5 +5		
Experiment 59.						
Dog No. 31—						
Old, fat, pug, intestinal obstruction at point of anastomosis done 10 days before.		B A B A B B	Duod. Duod. 20 in. lower ab. obst'n. 20 in. lower ab. obst'n. Bel. obst'n, bowel empty. Bel. obst'n, bowel empty. Appen.	+5 +5 +5 +5 +5 +5 +5		
Experiment 60.						
Dog No. 32-						
Female fox-terrier in reduced condition following operation, appendectomy 10 days before. Yellow fluid in intestine.	180 181	A B A B A B A B	Duod. Duod. 20 in. lower. 20 in. lower. 20 in. still lower. 20 in. still lower. 4 in. above ap. 4 in. above ap.	+5 +5 +5 +5 +5 +5 +5 +5		
Experiment 61.						
Dog No. 33—						
Large male setter, reduced	187 188 189 190 191 193 194	2 A B A B A	Duod. Duod. 20 in. lower. 20 in. lower. 20 in. still lower. 20 in. still lower. 4 in. above ap. 4 in. above ap.	+5 +5 +5 +5 +5 +5 +5 +5		
Experiment 62.						
Dog No. 34—						
Female fox-terrier in reduced condition following operation 10 days previous.		B A B A	Duod. Duod. 20 in. lower. 20 in. lower. Just ab. ap. Just ab. ap.	+5+5+5+5+5+6	5 5 5	

#### APPENDED TABLE.

Tests.

*		ilture.	Tourism	H	owth	
Experiment 31.	No.	Medium.	Location.	24	48	72
Dog No. 11—			•			
Test insufficient.				•		
Experiment 32.		•				
Dog No. 12—						
Test insufficient.						
Experiment 38—						
Dog No. 11—						
A total of 200 grains was given	55	A B	Stom. Stom.	$^{+2}_{+2}$	$^{+2}_{+4}$	+2 $+4$
in divided doses, extending over a period of ten days.	56 57	A	Duod.	+1	+1	+1
over a period of ten days.	58	В	Duod.	+5	+5	+5
	59	A	8 in. bel. No. 57.			
	60 61	B A	8 in. bel. No. 57. 12 in. lower than No. 59.			
	62	B	12 in. lower than No. 59.			
	63	A	8 in. lower than No. 61.			
	64	В	8 in. lower than No. 61.			
	65 66	A B	8 in. lower than No. 63. 8 in. lower than No. 63.			
	67	A	8 in. lower than No. 65.		+2	+2
	68	В	8 in. lower than No. 65	+5	+5	+5
	69 70	A B	Sigmoid. Sigmoid.		• • •	
Experiment 47.	10	ь	Signioid.			
Dog No. 23 (See Exp. 50, 54)—						
A total of 200 grains was		Α	Stom. muc.			
given in divided doses, ex-	92	-	Stom. muc.			
tending over a period of six	93	-	Duod. muc.			
days. Food was withheld	1 94 95		Duod. muc. 16 in. lower than No. 93.	• • •		
for four days.	96	_	16 in, lower than No. 93.			
	97		20 in. lower than No. 95.			
	98		20 in. lower than No. 97.		+2	+2
	99 100	90%	20 in. lower than No. 97.			
	101		Just above ap.	+3	+5	
	102	В	Just above ap.	+5		
Experiment 65.						
Dog No. 29—						
A total of 80 grains was given	1 221	A	5 in. below duod.	+1	+1	+1
in divided doses, extending over a period of six days			5 in. below duod. 15 in. lower.	• • •		
Food was given all the time	e. 224		15 in. lower.	+4	+5	+5
	225	5 A	20 in. lower.			
	220 227		20 in. lower. 10 in. lower	1.4		
	228		10 in. lower.	$^{+1}_{+5}$	+2	+2
Experiment 66.						
Dog No. 28—						
A total of 130 grains was give	n 22	9 A	4 in. below duod. muc.	+5		
in divided doses, extendin	g 23	0 B	4 in. below duod. muc.	+5		
over a period of eight days Food was given all the tim	e. 23	1 A 2 B	8 in. bel. No. 229 muc. 8 in. bel. No. 229 muc.	$^{+5}_{+5}$		
100d was given an the thin	23	3 A	8 in. bel. No. 231 muc.	+5		
	23		8 in. bel. No. 231 muc.	+5		
	23 23		8 in. bel. No. 233 mem. 8 in. bel. No. 233 mem.	+5		
	20	о Б	o m. bei. 140. 233 mem.	+5		

EX	PERI	MENT 63—	-(Continued)	Gre	owth.	
		tur <b>e.</b> Medium.	Location.		ours. 48	72
	237 238 239 240 241	A B A B A	8 in. bel. No. 235 Wall. 8 in. bel. No. 235 Wall. 8 in. bel. No. 237 Cont. 8 in. bel. No. 237 Cont. 12 in. bel. No. 239, 10 in.	 +5 +5		
	242	В	ab. ap. 12 in. bel. No. 239, 10 in. ab. ap.	+5 +5		
Experiment 70 (See Exp. 63.)						
Dog No. 27—						
A total of 70 grains was given in divided doses, extending over a period of seven days. Food was withheld for four days.	248 249	A B A B A B	7 in. bel. duod. Cont. 7 in. bel. duod. Cont. 12 in. bel. No. 247. 12 in. bel. No. 247. 20 in. lower. 20 in. lower. Just above append. Just above append.	+5 +5 +5 +5 +5 +5 +5 +5 +5		
Experiment 74.						
Dog No. 28—					1 11	1
A total of 300 grains was given in divided doses, extending over a period of ten days. Food was withheld for six or eight days. The large intestine was full of hard fecal matter.	278 279 280 281	ABABABABABABABABABABABABABABABABABABAB	6 in. bel. duod. muc. mem. 6 in. bel. duod. muc. mem. 12. in. bel. 277 muc. mem. 12. in. bel. 277 muc. mem. 12 in. bel. 277 Cont. 12 in. bel. 279 Cont. 12 in. bel. 279, muc. mem. 12 in. bel. 279, muc. mem. 12 in. bel. 279, Cont. 12 in. bel. 279, Cont. 12 in. ab. 279, Cont. 12 in. ab. app. muc. mem. 12 in. ab. app. muc. mem. 12 in. above app. cont. 12 in. above app. cont. 14 in. above app. cont. Append. cont. Append. cont. 4 in. above append. muc. mem. 4 in. above append. muc. mem. Duod. bile stained wall Duod. bile stained wall Stom., frothy muc. Gall from gall bladder Gall from gall bladder	+5 +5 +5 +5 +5 +5 +5 +5 +5 +5 +5 +5 +5 +	+5	
Dog No. 22—						
Was given a total of 3 litres in divided doses, extending over a period of three days	72	A A A	Duod. yellow muc. 8 in. bel. No. 71 yel. muc. 8 in. bel. No. 72 yel. muc. 8 in. bel. No. 73 yel. muc.		+5	+5
Food was given all the time Accidentally drowned on the fourth morning by passing the catheter into the trachea	e 75	A A A A A	8 in: bel. No. 73 yel. muc. 8 in: bel. No. 74 yel. muc. 8 in. bel. No. 75 yel. muc. 8 in. bel. No. 76 yel. muc. 8 in. bel. No. 77 yel. muc. 8 in. bel. No. 78 yel. muc. Rectum feces	+2 $+1$	$+1 \\ +5 \\ +1 \\ +1 \\ +1$	+1 +1 +1 +1

	Culture.			Gr	,	
		ture. Medium.	Location.	24	ours.	72
Experiment 53.	2.0.	212002111111	Hocation.	-4	40	1-
Dog No. 26—						
Was given a total of nine litres	131	A	Stom.	+4		
in divided doses, extending		В	Stom.	+5		
over a period of nine days.		Ā	Stom.	-4		
Food was withheld for two		В	Stom.	-5		
days.	135	A	Duod.	+4		
	136	В	Duod.	+5		
	137 138	A B	4 in. bel. No. 135 muc. mem			
	139	A	4 in. bel. No. 135 muc. mem 4 in. bel. No. 137	.+3 +4		
	140	В	4 in. bel. No. 137	+5		
	141	A	4 in. bel. No. 137	+4		
	142	$\mathbf{B}$	4 in. bel. No. 137	+5		
	143	A	4 in. bel. No. 139	+3		
	144	В .	4 in. bel. No. 139	+5		
	145	A B	4 in. bel. No. 143 4 in. bel. No. 143	+4		
	$\frac{146}{147}$	A	4 in. bel. No. 145	$+5 \\ +4$		
	148	В	4 in. bel. No. 145	+5		
	149	Ā	4 in. bel. No. 147	+4		
	150	$\mathbf{B}$	4 in. bel. No. 147	+5		
	151	A	8 in. bel. No. 149	+4		
	152	В	40 1 1 1 37 484			
	153	A B	12 in. bel. No. 151 12 in. bel. No. 151	+5		
	154 155	A	12 in. bel. No. 151 wall	$+5 \\ +3$		
	156	В	12 in. bel. No. 151 wall	+5		
	157	Ā	Near append.	+5		
	158	В .	Near append.	+5		
	159	A	Append.	+5		
Experiment 54.	160	В	Append.	+5		
•	г.	W WO.)				*
Dog No. 23 (Used before. See			<b>n</b>			
A total of seven litres was		A	Duod. yel. muc.	+5		
given in divided doses, ex- tending over a period of		B A	Duod. yel. muc. 20 in. bel. No. 201	$+5 \\ +5$		
seven days. Food was with		В	20 in. bel. No. 201	+5		
held for one day. Accident		Ā	12 in. bel. No. 203 yel. muc.			
ally drowned by passing the		В	12 in. bel. No. 203 yel. muc.			
catheter into the trachea.	207	A	Near append.	+5		
	208	В	Near append.	+5		
	209	A	Append. feces	+5		
F	210	В	Append. feces	+5		
Experiment 63.						
Dog No. 27. (See Exp. 70.)						
A total of three litres was		A	3 in. bel. Duod.			
given in divided doses, ex		В	3 in. bel. Duod.			
tending over a period of five		A	20 in. bel. No. 211		1.4	1.4
days. Food was withhele		B A	20 in. bel. No. 211	+3	+4	+4
for one day.	$\begin{array}{c} 215 \\ 216 \end{array}$	B	30 in. above append.	$^{+2}_{+5}$	+3	+3
	217	A	20 in. above append.	7.0		
	218	В	20 in. above append.	+4	+5	+5
	219.	A	8 in. above append.	-4	+5	+5
	220	В	8 in. above append.	+5		
Experiment 71.						
Dog No. 35—						
A total of four litres wa		A	4 in. bel. duod. muc. mem.	+1	+1	+1
given in divided doses, ex		В	Tube broke.	. 14	1.4	1.0
tending over a period of fiv days. Food was withhel	d 258	A B	12 in. bel. No. 255 muc.mer 12 in. bel. No. 255 muc.mer		+1	+2
for four days.	259	A	12 in. bel. No. 257 int. fluid			
and and and				2		

#### EXPERIMENT 71—(Continued)

	C	ulture.			rowth, lours.	
		Medium.	Location.	24	48	72
	260 261 262 263 264 265 266 267 268	B A B A B A B	20 in. bel. No. 259 cont. 4 in. bel. No. 261 muc. mem. 4 in. bel. No. 261 muc. mem. 4 in. bel. No. 261 cont.	+3 +5 +5	$\begin{array}{c} +1 \\ +4 \\ +4 \\ +1 \\ +2 \\ +4 \\ +4 \end{array}$	$+2 \\ +5 \\ +5 \\ +1 \\ +2 \\ +5 \\ +5$
Experiment 72.						
Dog No. 36— A total of five litres of freshly prepared was given in divided doses, extending over a period of six days. Food was withheld for six days.	$\frac{270}{271}$	A B A B A B A B			$   \begin{array}{r}     +1 \\     +2 \\     +5 \\     +5 \\     +5 \\   \end{array} $	$\begin{array}{c} +1 \\ +3 \\ +3 \\ +2 \\ +5 \\ +5 \end{array}$
Note—Abbreviations: A. B. Stom. Duod. Int. Ap. or Approximate Cont. Wall. Muc. Mem. Yel. Ab. Bel.	oend.		=Agar. =Bouillon. =Stomach. =Duodenum. =Intestine. =Appendix. =Bowel contents. =Bowel wall. =Mucus. =Membrane. =Yellow. =Above. =Below.			,

The sign (...) signifies no growth.

The sign (+) signifies growth, the numeral designating the comparative amount.

#### THE IMPORTANCE OF RECTAL EXPLORATION IN CHILDREN.\*

#### LOUISE ROSENTHAL-THOMPSON, Traverse City.

The great importance of a rectal examination aided by bi-manual palpation in the diagnosing of obscure diseases occuring in childhood was first impressed upon me by Dr. Dillon Brown, of New York, and I have learned its value in clearing up obscure cases and bringing relief where without this procedure my diagnosis would have remained in doubt and my treatment emperic.

Rectal examination as an aid in diag-

nosing abdominal disease is naturally of greatest importance in young children, as the rectum of the young is nearly straight, the sacrum but slightly concave and the sphincter ani feeble, and its self-control but gradually developed, thus making it possible to explore a considerable area of the abdominal cavity outside the pelvis; this of course depends upon the size of the child, the length of the examining finger and whether or not an anæsthetic is employed. In Carpenter's method of examination "the pa-

<sup>\*</sup>Read before the Michigan State Medical Society at its annual meeting at Petoskey, 1905.

tient's legs are well drawn up so that the thighs are flexed upon the abdomen, and with the pelvis raised upon a cushion, the left hand of the examiner on the abdomen, and the right index finger in the rectum, the right side of the abdominal cavity, and by reversing the hands, the left side up to the level of the umbilicus and sometimes a little beyond this level can be manipulated with ease between the two hands, and the condition of the intestines as well as the glands apart from any abnormalities found within the pelvis determined."

#### MOVABLE KIDNEY IN CHILDREN.

This condition is dismissed in our textbooks on diseases of children with but a single line, "as one of the rarest abnormal conditions in early life." But Comby reports eighteen cases personally examined. Of these cases sixteen were girls, and in fourteen of the cases the mobility was associated with dyspepsia and dilatation of the stomach. In nearly every case the affection was latent and in two it had been mistaken for chronic appendicitis. Twice it had been recognized and treated. Gutterbock, Ewald and others believe all cases to be of congenital origin. Dr. C. D. Aaron, in answer to a letter of inquiry, answers: There is no doubt in my mind but that movable kidney is congenital. I have patients as young as six years on whom I have been compelled to put on an abdominal support. Dr. Mayo, in response to a letter, says: "We have seen a number of cases of movable kidney in chil-Nearly all of these were in females, and most of them we thought were congenital." Drs. Mayo have not operated on any of these cases, "as in no one were we able to show the complaint was caused by the kidney that was movable."

Personally I have met with two cases: both had been bottle babies with enormously distended abdomens, which they still retained at the age of 2 and 3 years respectively. In these cases without a rectal examination under an anæsthetic it would have been impossible to have felt below those wind distended abdominal walls and grasped that elusive tumor. As dilatation of the stomach is accompanied in some cases with vague nervous symptoms and muscular weakness, as well as movable kidney, it is difficult to say which of the relaxed or displaced organs is most to blame for the symptoms.

Frequently the dilated stomach fills the mind and eye of the physician to the practical exclusion of the other and equally important condition and even of the underlying cause and the dilation is treated as if it were the cause instead of a symptom.

#### SARCOMA OF THE KIDNEY.

is a comparatively common occurence in childhood; the growth is so rapid that it may be mistaken for enlarged liver on the right or an enlarged spleen on the left side. Little reliance can be placed on an urinary analysis. First, the difficulty of getting a specimen from a little child; second, the normal kidney secretes normal urine; and, third, the ureter of the sarcomatous kidney may be involved in the destructive changes, and no urine from the diseased kidney enters the bladder. Here again the rectal and abdominal examination might be of value, enabling one to trace the growth back towards its attachments. Perinephritis is very frequently mistaken for hip joint dis-Here a rectal examination with palpation might elicit pain and tenderness in the ilio-costal space before the abscess is large enough to be appreciable by percussion.

Renal calculi occur frequently in male children before the fifteenth year. In calculus in the ureter when the stone is below the brim of the pelvis the characteristic tender point on abdominal palpation which often indicates the point of impaction of the calculus higher up the ureter is absent. Rectal examination will often show the location of the calculus.

Prolapsus ani is so common in children that Prof. Henock, of Berlin, calls it a specialty of childhood and advises in all cases occurring in boys past the second dentition to examine for stone and reports cases where the stone was so deeply imbedded in the bladder walls as to elude the beak of the examining sound, and that by a rectal examination, aided by palpation, a stone was discovered.

#### TUBERCULAR PERITONITIS.

The diagnosis between tubercular peritonitis and chronic intestinal catarrh with distended bowels, rigidity of abdominal walls, emaciation and fever, especially if ascites is absent, is one beset with difficulties, not only to the beginner, but to the experienced practitioner, and many a learned physician has met his Waterloo bit of humanity with wind distended in a little emaciated, struggling, wailing bowels.

It is almost impossible in many cases to say there is an absence of peritonitis until a combined rectal and abdominal examination has been made. "When one feels between the examining fingers an appreciable amount of material other than the abdominal walls and tumors we may be sure we feel the peritoneal coat of the intestines, thickened with lymph, but if we feel the fingers separated by the abdominal walls alone we may dismiss

the thought of peritonitis, however much the external appearance indicates it." We may find fecal lumps that may suggest glandular impaction, or intestinal matting, but the fact that these masses may be broken or indented by the examining finger will prevent a mistake being made. The intestines affected with peritonitis tend to move en masse when pressed upon, but in health they yield to the finger.

August 27, 1904, I was called to see Mary L., aged 3 months. Mother and father healthy. No history or indication of tuberculosis or syphilis. History: Child remained same weight as at birth, constipated, vomiting, fretful and sleepless. Never slept more than fifteen minutes at a time, was bottle fed on diluted milk (no formula) every hour. Required constant attention of mother. nurses and aunt. Examination revealed emaciated child with distended abdomen, rigidity of abdominal walls and enlarged veins over abdomen. The child looked like a starved Cuban. Its length was twenty-one inches, abdominal measurement twenty inches, and weight three pounds ten ounces. Arm size of my index finger. Eczema from head to knees, excepting arms, over which the parchment-like skin was wrinkled, throat congested, tongue dry, red and glazed. No Prolapsus ani, no tenderness over abdomen. Pulse rapid, temperature 102; could find no evidence of disease of the lungs.

Child was placed in a bright, warm room, under the charge of a sensible nurse; child was placed in a padded basket with hot water bottles. Temperature of room 70. A wet nurse was secured, but child refused to nurse. Was placed on modified milk, modified to weight, not

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age, fed every hour and a half. In fourteen days eczema was cured and child had gained six ounces, and was taking and retaining twenty-two ounces of food in twenty-four hours. Temperature gradually sank to normal. A little more cream was added to formula; child promptly had an attack of acute indigestion, from which she nearly died. September 25th temperature ranged from normal to 101; gained twelve ounces, taking twenty-four ounces of food per day; no vomiting and bowels regular. From September 25th to October 25th temperature ranged from subnormal to 101, took food regular, slept better, as long as one hour at a time. The last three days of the month temperature remained normal; child weighed four pounds and twelve ounces, a gain of one pound and two ounces. On October 26th the child was given an enema, small amount of gas expelled. A rectal examination with abdominal palpation was made and a considerable quantity of material other than the abdominal walls was felt between the fingers—no doubt the peritoneal coat of the intestines thickened with lymph; and over last lumbar vertebra two large mesenteric glands. During all this time there was no evidence of disease of the lungs, and no diarrhoea. After two months a diagnosis was at last reachedtubercular peritonitis. There is no doubt in my mind but that this was primary in the intestines. Temperature continued subnormal to 101. Child resting fairly well, and taking and retaining twentyfour ounces of food per day. November 3, 6 a. m., was called. Child was breathing rapidly. Temperature 105. died at 9 a. m. of pneumonia, the lung symptoms lasting only fourteen hours. Here was a case that it would have been impossible to have arrived at a diagnosis without the combined examination.

In some cases of constipation the rectum-will appear normal, but further examination will reveal the trouble to be at the sigmoid flexture. The colon is enormously dilated and thickened and there is evidence in the stools of catarrhal process. Nothnagle has found the cause to be due to an abnormal congenital formation of folds at the boundary between colon and sigmoid flexture, which are closed like a valve by the coming feces, while an instrument will pass the folds without hindrance.

Morris S., aged 4 years, suffered from obstinate constipation from birth. Drugs, suppositories and enemas proved of little avail. Child was flabby and rachitic. Abdomen distended and tender. Fever and bronchitis, anæmic and complexion waxy. Examination under an anæsthetic revealed the rectum normal, colon filled with hard, irregular masses that could be indented in some places with the examining finger. A diagnosis was made of Heschsprung's disease or congenital dilatation of the colon.

A systematic use of bougies extending over months brought about a cure. Child is now strong and healthy and has a daily evacuation.

#### INTUSSUSEPTION.

Three-fourths of the cases of intussuseption occur in childhood and one-half are felt in the rectum. Carpenter tells us the sausage-like tumor of intussuseption may be found as like as possible that found in tubercular peritonitis. When it attacks the omentum, which it not infrequently does, it often forms a sausagelike tumor, passing transversely across the abdomen above the level of the umbilicus, and just such a tumor may be found in intussusception when the small bowel invaginates the large; further, there may be an absence of symptoms of obstruction.

In many well known diseases much valuable information can be gained by this method of examination. Pelvic abscess, rectal abscess, cysts, fissure, fistula, polypi, impaction of feces, impaled foreign bodies, the tumor of appendicitis, and last, but not least, constipation. How many little sufferers have been doped with all the remedies in and out of the pharmacopæa, with enemas and suppositories, cases accompanied with so much pain that the little sufferers scream in agony with each defecation, the contraction of the sphincter being so painful. Even a superficial examination will reveal a fissure at the junction of the skin and mucous membrane.

Inflammations of the tubes and ovaries are not uncommon in little girls who have contracted gonorrhea, which unfortunately is not uncommon in the neglected classes. Marx calls attention to the fact that salpingo-oöphoritis sometimes complicates vulvo-vaginitis in infants with symptoms similar to those found in adults. He supports this statement by referring to fifteen post-mortems of chil-

dren who had symptoms of this complication, and in five of them the fallopian tubes contained pus and the uterine attachments were sealed. There is no doubt in my mind that many cases of pelvic disease, whose origin is obscure, occurring in young girls at the age of puberty, may be traced to neglected vulvo-vaginitis in childhood, and a rectal examination, which is the only one permissible, would elucidate many cases and give the unfortunate patient the benefit of rational and scientific treatment.

The best diagnostic results are obtained in children under two years and under complete anæsthesia. The bowels should be thoroughly evacuated and washed out, and food withheld for at least ten hours. Under complete anæsthesia the examining finger gains 1½ inches in length, so to speak, because the complete relaxation allows the fingers to press upon the surrounding tissues in such a way as to push up the buttocks and allow deeper penetration of the examining finger.

We must always use extreme care and gentleness so as not to injure the delicate tissues—and always bear in mind the great difference in size between the pelvis of adult and little child.

## INFANT MORTALITY IN MICHIGAN AND DETROIT WITH AN INQUIRY CONCERNING A NORMAL INFANT MORTALITY RATE.\*

HERBERT M. RICH, Detroit.

Infant mortality is a not inaccurate measure of the civilization and good government of a country. It has been recently shown to have a definite relation to the rise and spread of democracy among the common people. The highest infant mortality of the present in countries whose statistics are available occurs in Russia, Bavaria, Austria, and Italy, while Norway, England, Canada

<sup>\*</sup>Read before the Michigan State Medical Society at its annual meeting at Petoskey, 1905.

and the United States show much better conditions. This is not difficult to understand when one remembers that the women of the first mentioned countries labor in the fields and may often be met hitched in front of a wagon with a donkey or a dog, or carrying brick and mortar up long ladders in the cities. Successful maternity and child-raising demand certain favorable conditions for the pregnant woman and that she may have time to give her child proper care after birth. As the working classes increase in intelligence and are surrounded by better conditions of living, we find them exempting their women from these unnatural conditions, and the story of their advancement is fairly well-told to the discerning reader by the decrease in their infant mortality.

The parallel does not fail to hold good in better governed states. An English writer has recently said that the birth and care of a child is the greatest object of civilization and that personal and national morality and success in the future are to be measured by that standard. "One may imagine all our statesmen, philanthropists and public men, our parties and our institutions gathered into one great hall and into this hall a huge spout which no one can stop, discharges every eight seconds a baby. Our success or failure with that never-ending stream of babies, is the measure of our civilization." It is evident that the statistics of infant mortality are of interest not only to the medical profession, but also to all students of social and political conditions.

In Michigan there is a curious discrepancy between the infant mortality in the state at large and the city of Detroit. In 1900 the death-rate for all ages per 1,000 inhabitants in the state was 13.4

and in the city, 14.14. The death-rate of infants under one year of age was in the state 121.3 and for the city 201.2. This shows that while the city compares very favorably with the state in general mortality, it furnishes far more than its share of the deaths of infants. We may even go further and say that Detroit not only exceeds the state at large greatly in its infant mortality, but that it also exceeds with one exception every city in the country equally large, omitting New Orleans and Baltimore which can hardly be compared justly with Detroit in this respect because of their large negro populations and great difference in climate. This relation to the other large cities is shown by the following table compiled from the last U. S. Census.

#### CITIES.

	Infant mortality—1900.
1.	New York 189.4
2.	Chicago 146.6
3.	Philadelphia 201.9
4.	St. Louis 164.4
5.	Boston 194.1
6.	Buffalo 150.9
7.	San Francisco 152.2
8.	Cleveland 185.5
9.	Cincinnati
10.	Pittsburgh 180.5
11.	Detroit 201.2
Bal	timore and New Orleans omitted.)
	STATES.
Mich	nigan 121.3
Vern	nont 122.1
New	York 159.8
Mass	sachusetts 177.8
	CITIES.
Casa	d Davids 1461
	nd Rapids 146.1
Bay	City
Kala	mazoo 135.9
Batt	le Creek 89.4

DE

	Infant mortality-1
Jackson	101.2
Ann Arbor	103.0
Milwaukee ,	190.2
Toledo	157.2
St. Paul	96.9
18	890. 1900.
United States 20	05.8 165.4

In this table are first arranged the large cities of the country in the order of their size, with the infant mortality per 1,000 of those living of the same age. Further down are a few of the states whose figures are available, showing that the state of Michigan has the smallest infant mortality of any of the registration states. Finally I have added the rates of a few near-by cities that we may see what our neighbors are doing.

That the country as a whole is making progress along these lines is shown by the fact that the death-rate of infants decreased in the registration areas of the U. S. from 205.8 in 1890 to 165.4 in 1900, while between the ages of one and two, the rate fell from 84.9 in 1890 to 46.6 in 1900, by far the largest decrease for any of the periods recorded. In New York City in 1891 there were 18,224 deaths under five years of age with a population of this age of 188,703, a rate of 96.0. In 1896 the rate was 77.5 and in 1900 it was 67, the population then being 233,537 and the deaths 15,648. Thus, although the infant population had increased by over 44,000, the total number of infant deaths actually decreased by 2,000. This was not accomplished accidentally or without great and well directed effort. Many agencies contributed to this magnificent result. Holt attributes it to a "wider diffusion of knowledge in the matter of infant feeding and hygiene; the fact that a larger number of infants

than ever before are now sent into the country in summer; that all infants are looked after with greater care in the summer, many agencies being at work to improve their condition. Not least important of these is the improvement of the milk supply and the furnishing of pure milk gratis from different centers, together with the general adoption during hot weather of some form of milk sterilization—a practice now well nigh universal among the tenements. Antitoxin has reduced the number of deaths in older children."

In the city of Detroit, however, the rate of infant mortality has shown no consistent decrease, as will be seen by the following table of deaths for the last six years:

Year	Ι	eaths under one year	No. deaths 1000 of sa age livin	me
1898		1091	167.7	1
1899		1137	174.1	)
1900		1149	175.6	Includ-
1901		1093	166.6	ingstill-
1902		1205	182.3	born
1903		1187	178.9	).
1904	(Gen. mort. =15.11)	1043	156.5	/

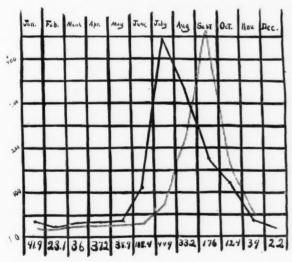
In 1900 the total number of deaths registered—excluding 106 deaths returned subsequently from November registration townships—in the state of Michigan was 33,778 of which 9,443 (28%) were under five years of age and 6,866 (20.3%) were under one year. In Detroit the whole number of deaths was 4,934 of which 1,610 (32%) were under five and 1,149 (23%) were under one. This means that the children of the state under one year of age, less than one-fortieth of the population, furnished over one-fifth of the total deaths in the state and nearly one-fourth of the total deaths in the city.

Inquiring a little closer into this high

mortality, we find that the monthly distribution of infant deaths in the city of Detroit for the three years—1898-1900—was as follows:

	Deaths Under One Year.	Deaths From Cholera Infantum
Jan.	71	3
Feb.	88	1
Mar.	76	3
Apr.	73	0
May	72	1
Tune	114	9
July	173	81
Aug.	138	32
Sept.	95	22
Oct.	76	34
Nov.	87	4
Dec.	61	0

Of 6,866 deaths under one year in the state in 1900, 1,933 or over one-fourth were due to infantile diarrhea. Many

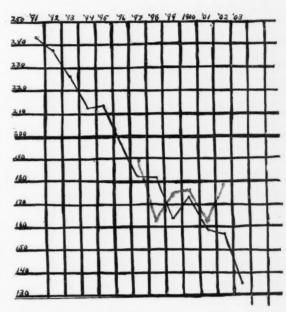


Death rate from Diarrheal diseasee under five years per 100,000 population in Michigan, 1900.

Rural Districts.

deaths recorded as due to convulsions or debility were undoubtedly also due to diarrheal disease so that the share of infantile diarrhea in the total death-rate is even greater than the figures here given would indicate. This being the largest single item of death, it has also been given by months, as near as may be, the figures for cholera infantum being given for 1900. This shows the great correspondence of the infant death-rate to the single item of infant diarrhea.

During the last four years over 40 per cent. of the total deaths in the city of Detroit in July and August were from



(Freeman).
Infant Mortality in New York City, 1891-1903.
Infant Mortality in Detroit, 1897-1903.

children under five years of age. It is not possible to say just what proportion of these deaths were due to diarrheal diseases, but from the figures already given it can hardly be doubted that this is the principal etiologic factor. In the state, the total number of deaths in the months of July, August and September, in 1900, was 8,587 of which 1,778 or 20 per cent. were caused by infantile diarrhea.

There is no other single disease which forms so large a part of our mortality for any given season as infantile diarrhea. It also ranks among the first three diseases in the point of total mortality in the state. In fact in 1900, it was the cause of more deaths in the state than any other one disease—the exact figures for that year being as follows:

Infantile diarrhœa	2,503
Organic heart disease	2,472
Pneumonia	2,035
Tuberculosis of lungs	2,018
Cancer	1,460

In other years, either tuberculosis or pneumonia commonly heads the list, but they with organic heart disease occur at all seasons of the year more or less uniformly and at all ages, whereas infantile diarrhea as shown in these figures comes from one year of life and largely from one season of the year.

The mortality under one year of age in the city of Detroit for the year 1900, then, was about fifteen times as great as the general mortality at all ages for the city. The infant death-rate in both the city and the state of Michigan has been ten times as great as the general mortality rate as far back as we have any reliable statistics. This excessively high rate has been regarded with complacency in general. Comment on the subject is apt to be met by both the profession and the laity with the remark that a large number of deaths among the new-born is to be expected. The reasons given may be included in the conditions recorded ordinarily among the causes of death as congenital debility, hereditary disease, and malformations. In the table following-which probably represents a fair average, malformations, congenital debility and premature birth, caused 1,596 deaths in a total number of deaths under one year of 6,866 or 23.2 per cent. The comment above mentioned is, then, true in a limited degree. The causes mentioned do bring about a large number of deaths during the first year of life, while they are largely eliminated from later death reports. Statistics of

the causes of death, however, quickly show one that these causes do not at all account for the prevailing high rate of infantile mortality; on the contrary, the rate is at once seen to be unnecessarily high because of the large proportion of the deaths of infants which occur from preventable diseases.

In recognition of these facts, the author has attempted to formulate as nearly as may be, a normal infant mortality. In order to do this, deaths should be included in such a mortality only from those diseases which are now considered by the profession to be non-preventable. That is, to subtract from recent mortality statistics those deaths occurring in children from preventable diseases and to call the remainder a normal, an unpreventable, mortality.

In order to determine which diseases should be considered preventable, the following question was addressed to a number of well-known physicians representing different parts of the country and mostly prominent in pediatrics, "Will you kindly mark on the enclosed sheets those diseases of children which you regard as preventable by proper sanitary regulations and efficient medical attendance, leaving those unmarked which you regard as still unpreventable?" The enclosed sheet contained the list of diseases of the condensed Bertillon system of international classification of diseases for statistical purposes. Replies were received from the following physicians: Dr. L. Emmet Holt, New York; Dr. J. P. Crozer-Griffith, of Philadelphia; Dr. F. Forchheimer, of Cincinnati; Dr. C. G. Jennings, of Detroit; Dr. George Dock, of Ann Arbor; Dr. H. B. Baker, of Lansing, and Dr. John Lovett Morse,

of Boston. The substance of their replies is shown in the following table:

			er.	r	1er			Number of deaths in Mich. in 1900			
LIST OF DISEASES	Holt	Dock	Jennings	Baker	Forchheimer	Crozer G.	Morse	Under I year	I to 2 years	Under 5 years	
Typhoid fever.  Measles Scarlet fever. Whooping cough. Diphtheria Influenza. Other epidemic	1111111	11/1/1/1	/ . / . / . /	1////	11/1/1	1////	X X X X	135	13 69 27 37 256 7	39 229 151 199 274 52	
diseases  Malaria.  Tuberculosis  Rheumatism  Diabetes.	. 2	1				1///		8 7 76 2 1	3 4 40	13 23 158	
Other general diseases 3 Simple meningitis 4 Cerebro-spinal meningitis							× ×	133	10 71	287	
5 Cerebral congestion and hemorrhage	5.	x .		:		. 2 K 2		458 93	12 2 43 28 10	77 1; 519 130 16	
eases		x.			.1.		.1	13	7	2	
Bronchitis					!	11:	X	0 292 0 547 0 5	208	41 91 1	
eases		XXX		/	/	//	/ X	103 X 203 X 1933 X 60 21 0 16	23 404 25 4 10 2	13 23 250 10 3 3	
22 Bright's disease	ty					x	X	X 106 / 29 X 54 X 17 183 1413	10 9 5 17	20	
(b) Premature birth (c) Neglect		:/		/	/	/	0 /	O	3 46	2	
Total Preventable		• • •						6866	8 751	94	

KEY: / Preventable x Largely preventable o Partially preventable

On the whole there is fairly good agreement in the answers; a few have qualified the word "preventable" by "almost entirely," "largely" or "partly" in the case of a few diseases. Curiously enough the only disease which was absolutely and unqualifiedly agreed to be preventable was typhoid fever; and in May, this disease was present in 117 different places in the state of Michigan.

Small-pox was not directly checked in this list, as it is included under the head of "other epidemic diseases."

Following the concensus of opinion, typhoid fever, measles, scarlet fever, diphtheria and croup, whooping cough, influenza, other epidemic diseases, malaria and tuberculosis would be regarded as preventable. Convulsions of infants are regarded as largely preventable and there is substantial agreement that stomach diseases, infantile diarrhea, and dysentery, are preventable. These diseases then, and they only, will be considerd preventable for the purposes of this paper. It will be noticed that only three of the single diseases (exclusive of congenital anomalies) failed to be held by at least one correspondent "largely preventable." These three are diabetes, cerebro-spinal meningitis and iliac abscess. Four of the gentlemen quoted consider bronchitis, pleurisy and pneumonia to be at least "largely preventable." It is of interest also, to note the long list of diseases to which Dr. Holt applies this term. Dr. Griffith and Dr. Forchheimer insist that accidents should be considered preventable; and indeed when one compares the number of accidental deaths in any American city with that in any English, French or German city of the same size and considers the customs of these cities it is difficult to escape the conclusion that many of our accidental deaths are due to poor police regulations and enforcement.

On this same chart is shown the number of deaths in the state of Michigan for the year 1900 from each of the causes on the list for the ages named. Of 6,866 deaths under one year of age, 3,078 or 44.8 per cent. were caused by the preventable diseases. Of 1,366 deaths be-

tween the ages of one and two, 751 or 54.9 per cent., were preventable. The mortality for Michigan for 1900 having been 126.8 (under one year) if 44.8 per cent. of this was unnecessary, the normal number of deaths for that year would have given a rate of 70 deaths per 1,000 of living infants. If this saving of life could have been carried out in Detroit last year, that city would have had the lowest general mortality of any large city in the country.

It may be said that this rate of 70 per 1,000 of living infants is still too high to be called a normal infant mortality,—certainly nothing higher could be termed a reasonable one. In the calculation only that part of the present high mortality has been taken away which is generally conceded to be preventable. As a matter of fact, infant mortality among the better classes of Americans can today be kept at about one-half the figures quoted above. Dr. Holt in his presidential address before the American Pediatric Society in 1898 said: "Of 151 children who have been in my care during practically their whole infancy during the last eight years, not one died before reaching the age of two years,-only thirty of this number being entirely breast-fed, and in the last eight years practicing almost exclusively among children, I have had among my own patients but six deaths under two years." Dr. Holt continues that he has personally inquired of six of his colleagues in pediatrics in New York and finds that their mortality in private practice varied but little from his own; and he concludes: "From the facts thus obtained, I judge that in the well-to-do classes, with the best care, the mortality from all causes during infancy does not exceed

2-3 per cent. These are hopeful signs and show the possibility of very great reduction in infant mortality everywhere with a better understanding of all the conditions but especially of infant feeding."

The following conclusions may be drawn:

- (1) Infant mortality and the care of children are in a general way a measure of the civilization and enlightenment of a state or community.
- (2) The state of Michigan and the city of Detroit while corresponding very closely in their general mortality rates, differ markedly in the relative rates of their infant mortality.
- (3) The state of Michigan presents the lowest infant mortality rate of any state in the registration area of this country.
- (4) The infant death-rate in Detroit exceeds that of any other city in the north equally large with the single exception of Philadelphia and is unnecessarily high.
- (5) There is general misapprehension of the real cause of this excessive mortality.
- (6) The chief item in this high infant mortality is diarrheal disease.
- (7) Infantile diarrhea is constantly one of three most frequent causes of death in the state. Being confined to one year of life and largely to one season of the year, it constitutes the most concentrated body of mortality which we have and in that respect affords a good mark toward which we may direct sanitary measures.
- (8) Since infantile diarrhea and the contagious diseases are largely preventable, this mortality is unnecessarily high.
- (9) Contrary to the conditions in the country at large and in many of our

large cities, infant mortality in Detroit is not decreasing.

- (10) Our present sanitary laws do not efficiently protect our infant population from the diarrheal diseases.
- (11) There was substantial agreement among the correspondents named that the following diseases of infants were preventable,—typhoid fever, measles, whooping-cough, scarlet-fever, diphtheria and croup, influenza, other epidemic diseases, malaria and tuberculosis, stomach diseases, infantile diarrhea and dysentery.
- (12) a. 44.89 per cent. of the deaths under one year in the state of Michigan in the year 1900 were from preventable diseases. This means that there were 3,078 unnecessary deaths at this age.

b. 54 per cent. of the deaths in the second year of life were from preventable diseases.

c. Congenital conditions accounted for less than one-fourth the deaths under one year.

(13) On this basis a reasonable in-

fant mortality for the state of Michigan, should not exceed 70 per 1,000 living infants.

(14) A normal infant mortality as shown by the experience of Dr. Holt and his colleagues in New York City, would be between 20 and 30 per 1,000 living infants, about one-tenth of the present rate of infantile mortality of Detroit.

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#### TECHNIQUE OF LABOR.\*

W. H. SAWYER, Hillsdale.

The large per cent. of child bearing women who are subjects for the gyne-cologist impresses forcibly the extent of the disabilities resulting from the parturient period. It is of course impossible to determine just what proportion of these postpartum lesions are necessary and what avoidable. That the reason for a large per cent. of them antidates the pregnancy and is inherent in the race and individual is unquestionable and

they are consequently beyond the reach and avoidance of the most skilled accoucheur. Many of them, however, are due to faulty management of the second stage of labor and are within the range of prevention.

The correction of the first cause or inherent weakness, with which so many women are affected, is a matter of evolution which many generations of better living only can favorably influence to a marked degree. The tendency of modern civilization and living is not toward improvement but tends to more defective

<sup>\*</sup>Read before the Michigan State Medical Society at its annual meeting at Petoskey, 1905.

and artificial habits of life with less symmetrical development and impaired resistance. The profession has striven to better conditions for posterity and to make art compensate as far as possible for existing defects and thus reduce to the minimum the results of inherited frailties.

Puerperal diseases, because of better management during pregnancy and the lying in period, have become much less frequent and formidable. Postpartum sepsis is rare to-day in the practice of well trained and careful men. there are still many careless practitioners who do not observe established rules of asepsis, their number grows less year by year, and the demand for higher standards of education both by the profession and the laity, enforced through legal channels, will soon reduce to the minimum the per cent, of the incompetent. The best schools are furnishing practical training in obstetrics which, until the last few years, was not given or demanded. The student was taught by precept, and experience was his only instructor in the practice of his art. Under these circumstances it was a question of individual adaptibility and self-education with skill, slowly, if ever, acquired. Any school which does not now furnish an obstetric clinic is handicapped in its standing and reputation for thorough training of its graduates and must lose in competition with its more progressive rivals.

Thorough preparation of the patient, the operator, and the environment, which are now deemed so essential, have superceded the former unpreparedness with which this vitally important business was undertaken. A bag filled with sterile towels, gauze, ligatures, and in-

struments for any emergency of delivery or repair is always at hand. The toilet of the hands is as carefully made as for an abdominal section. A good antiseptic is included in the equipment for the destruction of germs which cleanliness has not banished from the field of infection. Abdominal palpation reveals much to the well trained hand and thus makes the necessity for vaginal exploration less fre-The instruments are boiled and protected ready for use if needed. short, the patient is protected by every safeguard of a major operation. Surgical cleanliness is an art and only education, painstaking and persistent, will bring proficiency. No man who is incapable of a certain degre of perfection in this art should be permitted to practice obstetrics. The old superstitions of the lying in room are rapidly disappearing and, in common, with every other department of medicine, scientific research has removed, to a large extent, the uncertainty of cause and effect.

The large number of postpartum disabilities, immediate or remote, are due to lacerations of the uterine neck and perineum. In all labors at full term there is a lesion of the cervix of some degree, many of which heal without interference and are not recognized. Only very rarely is this defect attributable in any way to mismanagement but is an inevitable result.

It is to lacerations of the perineum to which attention especially is called. This injury is estimated to occur in 30 per cent. of all first, and in 10 per cent. of subsequent labors, and that one-half of all are avoidable. If this is true it is a matter of serious concern and a review of the subject is not out of place. In the primipara the frenulum is usually torn

and this slight injury requires no treatment. It is those lacerations of a degree surgical intervention demanding which the estimates refer. While there is no difference of opinion as to the policy of immediate repair of a laceration or that the results under favorable circumstances are satisfactory, the possibility of non-union and the increased danger of sepsis together with the distress and inconvenience to the patient, make it incumbent upon the attendant to use every means at command to prevent such an accident. Then too, the fact that so many old lacerations are found argues that either immediate repair was not undertaken or union did not take place.

A certain proportion of subcutaneous tears also occur but are obscured by the condition of the parts following labor. Numerous plans have been proposed for the prevention of these injuries, and any means for prevention must be directed to the increase of the distensibility and relaxation of the vaginal outlet and to reduce the diameter which it must com-The first condition must be met by so controlling the expulsion as to favor a steady and slow movement of the presenting part, giving the tissues time to relax, under pressure and tension, to the necessary degree. This rate of propress is largely within the control of the obstetrician through regulating forces of labor by anaesthetics, position, and manipulation, thereby retarding a precipitate expulsion before complete relaxation has been obtained. Chloroform carefully administered is most valuable at this stage of labor. It lessens the direct drive of the presenting part in the axis of the body and permits it to follow the axis of the canal, at the same time favoring a relaxation of the tissues generally. Only the judgment gained by experience will be a guide to its use.

It is sometimes possible by more or less prolonged and careful traction and massage of the perineum in the plane of the pelvic outlet to assist relaxation. The disadvantages of this procedure are the increased dangers of infection and the possible use of too much force. In skilled hands it may be a valuable adjuvant.

To at all times control the smallest possible diameter within the restricting girdle is the serious care of the operator, and lack of intelligent manipulation at this juncture is responsible for the major portion of avoidable injuries. The presenting part should be kept close in under the pubic arch and extension maintained without being forced. The bringing forward of the perineum out of the normal plane, or pressure upon the expanded tissues, can do nothing but harm.

The operation of episiotomy, if used with good judgment, is a very valuable means of saving injury to the pelvic floor. This consists in dividing the resisting ring midway between the anterior and posterior commissures. structures involved in the incissions which extend for one inch laterally and in the long axis of the body, and to onefourth inch in depth, are the skin fascia bulbo-cavernosus muscle. The wounds should be united by suture immediately following labor and they usually heal kindly leaving the vulva intact. It is good practice in every case of persistant occipito-posterior position to resort to the lateral incisions as laceration of considerable extent is the rule. It has been argued that this operation will not save the pelvic floor in every case but only adds to the vulvar injury. While

this may be the occasional result, yet the number of extensive lacerations it will prevent makes it advisable under proper conditions.

It is very important that the parts be exposed for careful inspection at the parturient crisis, as following this practice soon trains the operator to determine more positively the probable degree of distensibility of which the parts are capable and when to take prophylactic measures. An examination after the passage of the head will many times reveal a perineum intact which, after the advent of the shoulders, is found torn. This most often occurs because of hurrying the expulsion of the body by traction out of the normal parobolic axis.

Unless some emergency arises calling for prompt delivery, the head should be supported and the expulsive forces allowed to complete the birth. The posterior shoulder should present first and the arm be brought forward so lessening the diameter which falls within the vulvar ring. The application of forceps to the after coming head in breach presentations by maintaining flexion will save injury to the perineum. It has been demonstrated that forceps rightly applied and used do not increase the risks to the perineum.

The general practitioner must exercise a degree of ingenuity and resource for which he should have full credit. In a varying and often large percent, of his cases he is precipitated into a labor without having had previous knowledge or direction and must contend on the spur of the moment with the most unfavorable surrounding, and his skill in adapting himself to the conditions is taxed to the utmost. Painstaking and conscientious work under these circumstances will be the measure of his standing as an obstetrician and physician.

While this is only a brief synopsis of well established rules of conduct, yet in experience they are so often disregarded that it does not seem out of order to review the subject at this time.

#### A NEW HEMORRHOIDAL CLAMP.

ANGUS McLEAN, Detroit.

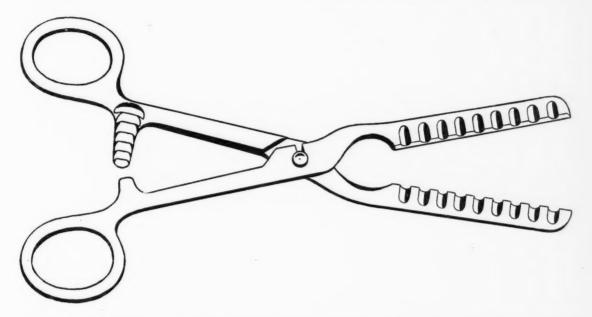
Different methods of treatment, both medicinal and surgical have been suggested and recommended for hemorrhoids. Few cases of hemorrhoids respond to medicinal treatment—such as cathartics, diet, and local applications. The majority of these patients seek surgical relief later in the course of their trouble. Several different methods, such as simple excision, ligation, cautery, clamp, clamp and cautery, etc., have been practiced. The simplest method, and most satisfactory to me, has been that of clamping the pile and stitching the margins of

the mucosa together, as one would in a wound of the integument.

For this purpose I had a clamp made, which I have used for the past two years and the cut of which is here shown. The body of the instrument is not unlike some clamps already in use. The blades are curved longitudinally, with one inner margin grooved and the other ridged. On the concave surface towards the inner margin of each blade is a number of grooves sloping from without inwards, the deepest portion of the groove dipping down two-thirds of the thickness of the blade. When the instrument is closed the

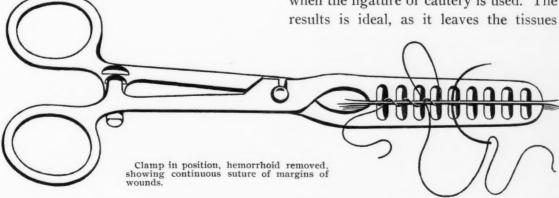
grooves of opposite blades come together so as to form a continuous depression. These grooves are about one-eighth of an inch apart and one-eighth of an inch in width.

through each groove. This suture may be continuous or interrupted. If but a few stitches are required the ends of the continuous suture can be brought together and tied as soon as the clamp is removed.



The hemorrhoid is drawn into prominence by forceps or tenacula and the clamp placed at the desired portion of its base and closed. The pile is then re-

These stitches control all hemorrhage, and bring the margins of the wound in close apposition. There is a very small margin of tissue compressed by the clamp and little sloughing follows. There is much less pain following this method than when the ligature or cautery is used. The results is ideal, as it leaves the tissues



The margins of mucous membrane are now stitched together by passing a well curved needle, with catgut ligature, moved with curved scissors or knife, following the concave surface of the clamp. in their normal position, without any fear of hemorrhage following, or of cicatrices forming later on.

This instrument can be used satisfactorily for the ligation of any pedicle.

## The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to Editor A. P. Biddle, 57 Fort Street West, Detroit, Mich.

Subscription Price, Two Dollars per year, in Advance

DECEMBER, 1905

#### Editorial.

#### NEW MEDICAL LEGISLATION.

The last session of the Michigan Legislature enacted the following important amendment to our medical law of 1899:

"The people of the State of Michigan enact:

Section 1. Section seven of act number two hundred thirty-seven of the public acts of eighteen hundred ninety-nine, entitled "An act to provide for the examination, regulation, licensing and registration of physicians and surgeons, and for the punishment of offenders against this act, and to repeal acts and parts of acts in conflict therewith," as amended by act number one hundred ninety-one of the public acts of nineteen hundred three, is hereby amended so as to read as follows:

Sec. 7. Any person who shall practice medicine or surgery in this State, who is not the lawful possessor of a certificate of registration issued under and pursuant to act number two hundred thirty-seven of the public acts of eighteen hundred ninety-nine, or the acts amendatory thereof, or without first complying with the provisions of this act, except as heretofore provided in section three of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not more

than two hundred dollars, or by imprisonment in the county jail for a period of not more than six months, or by such fine and imprisonment, for each offense. It shall be the duty of the prosecuting attorneys of the counties of this State to prosecute violations of the provisions of this act.

This act is ordered to take immediate effect.

Approved June 13, 1905.

The increase of penalty is of real importance because the prosecution of offenders may now be commenced in the Circuit Court instead of in Justice Courts as formerly. Heretofore it has been extremely difficult to get the case of one of these offenders into the Circuit Court at all because of the fact that if no conviction is obtained in the Justice Court the people, being the plaintiff, cannot appeal, and the defendant cannot again be required to answer for the same offense. Juries in Justice Courts have almost unlimited powers, being not only judges of the fact but of the law as well. Thus the lower court juries can give greater latitude to personal sympathies, prejudices or friendships. That these elements sometimes have weight with the juries was beautifully illustrated in the cases of Lucas and Griswold tried in Battle Creek in January, 1905. In neither of these cases were the people able to secure a conviction and in both the strongest pressure was brought to bear on the personal sympathies of the jurymen by the attorneys for the defense.

Upon the trial of Griswold, the defendant admitted that he had not complied with the law as to registration, but claimed that since he had been practicing prior to the amendment of 1903 he was not amenable to the law and was not re-

quired to register. On this theory he was acquitted. The prosecuting attorney, after waiting a few days in order to allow Griswold to further violate the law, drew up a complaint against him and presented it to Justice Batdorff, thus raising the point in the pleadings which Griswold relied upon for his defense. The justice refused to file the complaint, contending that Griswold's position was proper and legal. The prosecutor at once asked the circuit judge for a writ of mandamus to compel the justice to act. This was denied and the prosecutor took the matter to the Supreme Court on a writ of certiorari. The Supreme Court reversed the ruling of the circuit judge and granted the writ, fully sustaining the position of the people and the physicians in the following words:

"Attention is called to the fact that the act of 1899 requires all persons engaged in, or who wish to begin the practice, to make application, etc., while the amendatory act omits the former clause, thus apparently limiting the law to cases of beginners in practice. We think this inconsistent with the legislation upon the subject which began as early as 1883.

Act 167, Public Acts, 1883.

Act 216, Public Acts, 1883.

Considering these several acts it is reasonable to believe that in 1899 the Legislature took it for granted that practitioners then engaged in business had complied with the law of 1899, and that it was not the design to compel them to again make application. We can not believe that they deliberately intended to offer a premium to law breakers, which is the effect of respondent's contention. It is more reasonable to say that such a man is a beginner for the purpose of

making such an application, not being already a lawful practitioner.

The order of the Circuit Court is reversed and writ will issue as prayed.

The same Legislature passed an act (No. 330), "To provide for the immediate registrations of births and the requiring of certificates of births."

This act provides that "Local registrars for deaths shall also be the local registrars for births, and the Secretary of State shall be the state registrar for births, as for deaths." It requires certificates to be filed within ten days after birth. Each certificate will contain twenty-one items, as follows:

Sec. 2. The certificate of birth shall contain the following items:

1. Place of birth, including state, county, township, village or city. If in a city, the ward, street and house number. If in a hospital or other institution, the name of the same to be given instead of the street and house number;

2. Full name of child. If the child dies without a name before the certificate is filed, then the words 'died unnamed' shall be entered. If the living child has not been named at the date of filing the certificate of birth, the space for 'full name of child' is to be left blank, to be filled out subsequently by a special return of given name of child as hereinafter provided:

3. Sex of child;

4. Whether a twin, triplet or other plural birth. A separate certificate shall be required for each child in a case of plural birth;

5. Whether legitimate or illegitimate;

- 6. Full name of father;
- 7. Residence of father;

8. Color or race of father;

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- 9. Birthplace of father;
- 10. Age of father at last birthday, in years;
  - 11. Occupation of father;
  - 12. Maiden name of mother, in full;
  - 13. Residence of mother;
  - 14. Color or race of mother;
  - 15. Birthplace of mother;
- 16. Age of mother at last birthday, in years;
  - 17. Occupation of mother;
  - 18. Number of child of this mother;
- 19. Number of children of this mother now living;
- 20. Certificate of physician attending or midwife as to attendance at birth, including statement of year, month, day and hour of birth. This certificate shall be signed by the attending physician or midwife, with date of signature and address. If there was no physician or midwife in attendance, then the father, householder, manager or superintendent of public or private institution, or other competent person whose duty it shall become to file the certificate of birth as provided in section one of this act, shall draw a line through the words, 'I hereby certify that I attended the birth of above child,' and shall write in lieu thereof the words, 'No physician or midwife,' filling out the remainder of the certificate in regard to the year, month, day and hour of birth, and signing the certificate as father, householder, owner of premises, manager or superintendent of institution, as the case may be, with the address;
- 21. Exact date of filing in office of local registrar, attested by his official signature, and registered number of birth as hereinafter provided.

The certificate shall be written legibly in permanent black ink, and no certificate shall be held to be complete and correct

that does not supply all of the items of information specified above, if possible to obtain them, or satisfactorily account for the omission of any of said items."

Provision is made for making necessary changes in certificates in case facts have not been correctly stated at first, also providing fees for registrars and penalties for neglect or refusal to file certificate by physician or midwife or other person in attendance, and for altering any certificate of birth.

The act was approved June 20, 1905, and goes into effect Jan. 1, 1906.

Amendments were also passed giving the state board of registration power to revoke certificates issued through error or mistake or for circulating advertisements relative to venereal diseases or other matter of any obscene or offensive nature derogatory to good morals; for employing solicitors, cappers, or drummers, subsidizing hotels or boarding houses, or for paying or presenting to any person money or other valuable gift for bringing patients to him; and making it the duty of the board to refuse to issue certificate to any person guilty of grossly improfessional and dishonest conduct of a character likely to deceive the public.

These amendments take immediate effect.

Approved June 1, 1905.

W. H. HAUGHEY.

# THE NORMAL STIMULUS OF INTESTINAL PERISTALSIS.

It seems to be accepted by the majority of physiologists and clinicians that the natural stimulus inducing peristalsis in the colon is mechanical, and further that the essential feature of this stimulus is distention. In other words fecal material collects in the colon in sufficient quantity

to cause stretching of the bowel wall and as a result peristalsis is produced. Under normal conditions the important feature is the quantity, not the quality of the colonic contents. While it is a common clinical experience to observe a small amount of irritating material producing violent peristalsis the process differs essentially from the normal. In health, under normal conditions the chemical character of the feces is of no importance as far as the production of peristalsis is concerned. An inert substance, without chemical affinity for any substance in the intestine is a perfect agent as a stimulus for peristalsis if its consistency is suitable and its quantity sufficient. Many clinical observations strongly favor this view, but in order to gain additional proof I experimented on dogs to observe the effects of different agents upon peristalsis. To determine the effect of distention of the colon, the dog was anesthetized with chloroform, and the abdominal visera well exposed by long longitudinal and transverse incisions. The colon was emersed in normal saline solution at about 100 degrees Fah. A collapsed thin rubber bag was then inserted through the anus and made to rest in the rectum or colon. This bag had a tube attached for the purpose of inflation. By these means any degree of distention of the rectum or colon can be obtained readily. presence of the uninflated bag in the rectum produced no contraction. Moderate distention was followed after a length of time, varying in different dogs, and at different parts of the bowel, by waves of contraction. Usually the contraction was seen to begin immediately above the bag but occasionally it was first observed at

some distance. As distention was increased the peristaltic contraction followed more promptly and wave after wave propelled the bag along. These contractions continued even after the distention had ruptured the bowel. In most cases contractions of the abdominal muscles accompanied the peristalsis when it had reached a certain strength. These experiments seem to demonstrate that distention of the bowel induces normal peristalsis.

It has been contended by some physiologists that stretching increases and contraction diminishes the volume of a muscle fibre, and further that this increase and decrease in volume promotes the absorption of nutrition and the elimination of waste respectively. Whether this theory is correct or not it can be readily understood that the change of form caused by the stretching stimulates metabolism in the muscle fibre. Herbert Spencer writing on the phylogenesis of the alimentary track, states that "the evolution of the gastrointestinal muscle is made intelligible only when stretching is recognized as the stimulus of peristalsis."

This view of intestinal stimuli gives a physiological and rational explanation of the newer mechanical methods of treating atony of the rectum and colon.

Most of the non-medicinal agents that have proven efficacious in the treatment of chronic constipation involve and depend upon two facts: 1. Cathartic and other chemical irritants are discontinued. 2. Periodic stretching of some portion of the intestinal musculature is practiced.

J. A. MACMILLAN,

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## County Society Rews.

# FOR THE INFORMATION OF THE COUNTY SECRETARIES.

The following letter has been recently sent to each County Secretary, with the report blank published below:

Dear Doctor—As we are approaching the end of the fiscal year of the Michigan State Medical Society, and, as the Council meets early in January for the purpose of reviewing the work of the past and laying out the work for the next year, it is necessary that the members of the same be fully informed of the condition of every County Medical Society. I would, therefore, appreciate it very much if the dues of every member be collected as soon as possible after the annual meeting of the County Medical Society and forwarded at once to this office, with the list of the new officers and new members, that a good showing may be made.

There has been recently sent you a blank to fill out for the information of the Council. Every Secretary should give his careful attention to the details of the information requested, as the Council must form its judgment upon these reports.

Respectfully,

A. P. BIDDLE, General Secretary.

NOTICE.—The Secretary of the County Medical Society will please forward this Report to the General Secretary as soon as possible, not later than JANUARY 3RD. The General Secretary will tabulate the same for the information of the Council.

#### COUNTY SECRETARY'S ANNUAL REPORT.

The					County	Medical
Society,	Councilor I				19	
					13	90
General	Secretary, Michigan S	state M	[edical	Society		
	-				-	

Sir:—I herewith submit my Report of the............ County Medical Society for the year ending December 31, 190....:

...., Mich.

·Number of Active Members.

Number of Honorary Members.

Number admitted during year.

Number lost by death.

Number dropped by non-payment of dues.

Number dropped by Number resigned.

Number of Transfer Cards issued.

Number of Transfer Cards received.

Number of Meetings held.

Number of Papers read.

Number of Clinical Cases presented.

Average Number of Members in attendance at the Meetings.

Number of places in the County where Meetings were held.

Number of Resident Physicians (members) at each place where Meetings were held.

Number and Names of Physicians outside of the County who read papers.

Facilities for reaching places of Meeting—(a) By Rail, (b) By Drives.

Names of Councilors and other Officers of the State Society who attended the Meetings.

Number of Members at the close of the preceding year —Active and Honorary.

Estimated Number of Physicians in the County eligible to Membership (to include Members).

REMARKS.—Here please note what efforts are being made to maintain and to increase membership and interest in the County Medical Society, especially as to those who have been dropped for non-payment of dues.

Names and address of Members who have failed to receive The Journal of the Michigan State Medical Society regularly.

#### HURON COUNTY.

Whereas, Knowing the injurious nature and the more injurious effects of certain patent medicines now upon the market, several periodicals of the highest standing in our nation, notably The Ladies' Home Journal, Collier's Weekly, and others, have commenced a systematic campaign against the manufacture, sale and use of these nostrums, publishing for that purpose analyses of the various medicines and facts that have come to the knowledge of the editors of these papers; and

Whereas, The press of Huron County is an instrument for the dissemination of ideas, which reaches the people in all walks of life; and hence is capable of incalculable good; therefore,

Be it Resolved, by the Huron County Medical Society in convention assembled, pledging ourselves collectively and individually to the furtherance of this great work, that we invite the cooperation and assistance of the Huron County Press Club in carrying out the campaign begun by the great national periodicals.

B. FRIEDLAENDER,

President.

D. J. McCall,

Secretary.

#### LAPEER COUNTY.

The election of officers at the Annual Meeting of the Lapeer County Medical Society, October 11th, resulted as follows:

President-Geo. W. Jones, Imlay City.

Vice-President-W. J. Kay, Lapeer.

Secretary-H. E. Randall, Lapeer.

Treasurer—I. E. Parker, Dryden.

Delegate-Geo. W. Jones, Imlav City.

Alternate-Adam Price, Almont.

Dr. Adam Price, of Almont, read a paper on

"The Control of the More Common Contagious Diseases," in which he advocates uniform methods and time of quarantine for all townships alike. He blames physicians in protecting their pet patients from the full requirements of the law.

Dr. J. S. Caulkins reviewed the field of science, diplomacy, war and literature, showing what men over forty years of age have accomplished. This paper is to be continued at our next meeting.

Dr. Reuben Peterson of Ann Arbor read a paper on "The Indication for Operation in Pelvic Disease."

Abstract:

If we always knew when to operate or advise operation in cases of pelvic disease, a large part of our difficulties would be solved. A good surgeon is not only a skillful operator, but he must possess all that is implied in the way of diagnostic skill and judgment.

Diseases of the Pelvis are divided under four heads: 1. Diseases or disabilities resulting from childbirth. 2. Inflammatory affections. 3. Benign new growths. 4. Malignant disease, including tuberculosis.

A laceration of the cervix requiring operation is accompanied almost always by other pelvic lesions, and as an adjunct to dilatation, curretage, perineorrhaphy and removal of diseased appendages the operation is done. The cases are rare that simply need a trachelorrhaphy. If there be a bad laceration with erosion and eversion of the cervical lips, he would advise operation, even if there were no resulting symptoms.

Ruptured perineum is also usually associated with other forms of pelvic pathology, hence at the same time a perineorrhaphy is performed, the uterus is dilated and curretted, the cervix repaired and lesions of the tubes or ovaries attended to if necessary.

Inflammatory pelvic affections are of two groups, acute and chronic. The great majority of acute non-puerperal cases are due to gonococcus.

Nature protects the healthy peritoneum by throwing out around the inflammatory region vast quantities of plastic lymph. This gives us the clue as to the correct treatment. Open and drain the pus collection, so as to leave the protective lymph wall intact, by a vaginal incision and drainage.

The same is true of acute puerperal infection in a greater degree because of great virulence. The septic symptoms are due more to the absorption from the endometrium of the uterus and if symptoms become alarming these septic foci should be removed from the interior of the uterus. A laparotomy in this condition does not fulfill conditions of treatment as well as the less radical procedures. A failure to recognize this fact has been responsible for many deaths. These cases are not in the same class as pus tubes or ovarian abscess, as in the later case the pus is usually sterile.

Benign New-Growths.—Ovarian cysts should be removed as soon as the nature of the growth is determined. Much may be lost by delay. Careful microscopic examination shows that a greater percentage of ovarian growths is malignant than formerly supposed.

Fibroids.—His personal opinion gained from an experience of a number of hundreds of cases is that they are a source of danger to the patient and that they should be removed whenever they produce symptoms.

The only hope in malignant cases is in operation. So always operate as long as the disease exists and can be ameliorated by such a procedure. Where the disease has advanced beyond the limits of the uterus, remove all the disease one can with the curette and follow up such treatment with powerful caustics or the actual cautery.

In tuberculosis of the pelvic organs the operation should be as radical as possible and as early. He does not advocate an abdominal incision where the abdomen is filled with tubercular masses without an ascitic accumulation. Operation does little for these dry cases.

Epilepsy and insanity will not be benefitted by the removal of normal ovaries even if the convulsions occur at the menstrual periods.

Sterility.—Here again the indications for operation are clear. If there be disease operate for its cure in the hope of overcoming the sterility.

H. E. RANDALL, Sec.

#### LENAWEE COUNTY.

## INJURIES OF THE HEAD.

HAL C. WYMAN, DETROIT.

(Remarks before the Lenawee Co. Medical Society at Tecumseh, Oct. 10th, 1905.)

There are so many men of wide experience and great skill members of the Lenawee County Medical Society, that it looks much like "carrying coals to Newcastle" to ask me to come here with my comparatively meager knowledge and address you on the injuries of the head.

The external injuries of the head include the bruises, cuts and tears of the scalp, ears and eye-brows, and deserve your attention now according to the degree of damage these important organs have sustained and the kind of infection if any has occurred.

Sometimes the whole scalp is torn away and the surgeon confronts the need for a new one. There are four methods of dealing with this problem. When the denuded surface is in a fairly aseptic state of granulation, snip out pieces of sound skin anywhere, bits of skin about the size of a grain of flax, and transfer them to the raw scalp by simply imbedding them in the granulation.

These little grafts may be taken from almost any one who is healthy and has more skin than he actually needs. Dressing them with light paraffin paper and deluging the surface of grafts while covered with paper with warm salt solution is quite essential to the growth of the new scalp tissue. Hair bulbs may be transplanted from the head of one person to another by this method. Large grafts an inch in diameter may be shaved with a sharp razor cutting into the sound tissue and may be made to grow on the granulating head. Dressings must be provided that will not macerate the grafts or loosen them. I have turned long flaps of skin from each shoulder, two inches wide and reaching from acromion to hair line on back of neck, over the exposed pericranium and fastened them in position in contact with stump of frontal scalp near coronal suture. Then the long wound on each shoulder was closed with sutures approximating its long margins. One might in some cases secure enough skin to fill in the absent scalp by fastening the patient alongside of a sound person with plaster of Paris and adhesive dressings-a child to its mother for example and then making a huge flap free on three borders and suturing each border to the injured head. Then where the flap had begun to grow the nutrient border it must be separated from its donor, and all devices which bind them to the patient be relieved. Animals lower in the scale than man have been used in this way in attempts to restore the scalp. I have not known any of them to be successful.

You can see how attractive the scheme of growing the hairy skin of a dog or goat on the peeled head of your patient would be. Such a project involves problems and consideration of drainage and nutrition as serious as those confronted in building the Panama canal, and the dangers from infection would be as threatening and grave as the malaria and yellow fever at the Isthmus.

Cuts of the scalp should be carefully sutured as soon after they occur as possible. No time should be lost in a vain endeavor to clean the wound unless it be filled with filfth, cinders or other rough bodies. The flow of the bleeding surface is the best antiseptic you can have but the good it might do if often perverted by the surgeon tieing his suture so tight that he causes tissue necrosis. Put the stitches in just thick enough and tight enough to make the wound margins touch and not crowd each other. Then if the scalp and hair are soiled and matted they can be washed with soap, water and gasoline until clean and bright as may be.

Dry dressings and few changes give best results. Bruises and abrasions should be gently freed of hairs driven into them and they should be protected by a dressing of.

M. Add water enough to make paste.

This application will not hurt the new cells necessary for the repair of the injury and it is easily washed out of the hair with warm water, no matter how long it may have been there.

A man was brought to Emergency Hospital some years ago who had been in a dog fight. It had been his custom on occasions to fight bull dogs on their own terms, getting down on hands and knees and using teeth and nails as dogs do. A bull terrier had caught him by the ear and torn it to bits and shreds. There was little more than a bunch of pulp left. The cartilage was in pieces and some gone. I saved all shreds of ear tissue that I could and sutured them together and laid them on a gauze pad covered with paraffin paper and laid behind the auditory meatus. Every bit was sewed or adjusted to the stump and the whole mass covered lightly with the dressing above mentioned. Healing and granulation of tissue took place rapidly. To look at that ear now you would not think it had been so badly injured. If the ear is torn entirely off it should be replaced. If it cannot be found new ears must be made by erecting a long flap from the neck below the auditory meatus over the upper and posterior walls of the opening. My practice includes one case treated this way with satisfactory results.

When eye brows are cut or torn or bruised the injury is often complicated by damage to frontal sinus, contents of orbit or frontal lobe of brain. The complications will present the most serious features of the case. The mucosa lining the sinus must be treated with good drainage and caution that shreds of it are not permitted to become fastened between the fragments of bone else your patient will develop annoying fistula of the frontal sinus. Be careful in receiving wounds

of eye brows to have the sharp stiff hairs all point the right way and that the knots be not to tight for reasons already named.

Internal injuries of the head on the other hand concern the functions of brain and ear. Such injuries may be transient, brief and fleeting, when we say our patient has been stunned or sustained a concussion of the brain. Or, they may be deep and lasting when we say he has suffered a compression of the brain. Questions of diagnosis are sometimes quite hard to decide when the organs inside the head are concerned. I have found it a good idea to have a sort of working diagnosis for all such cases-if my patient has only disturbance of a sensory character, for example, if he is word blind and does not know a word when he sees it, or word deaf, does not know a word when he hears it, I say that he has an injury in the sensory region behind the fissure of Rolando. If he cannot speak certain words, has aphrasia or has enfeebled movements of fingers or hands then we find the lesion in brain tissue in front of the fissure of Rolando.

To demonstrate the accuracy of this working hypothesis we open the skull with an inch trephine anywhere between the external auditory meatus and the vertex of the skull. Then from that opening work up or down forward or backward with a bone gnawer in the direction in which the impaired functions leads us to think the lesions most likely is. If our patient has homonymous hemianopia of course we would look for the injury in the occipital lobe cunei and in that case we would open the skull over the cunei through the occipital bone. Practically all the other intracranum palpable can be searched through the channels mentioned. But one fact we must make sure to understand before we can do our whole duty to our case of intracranial injury and that is, there may be an intracranial injury demanding operation presenting no focalizing or localizing symptoms. Such a case would present no one sided paralysis or paresis, no one sided sensory impairment, no squint, ptosis or facial palsy, but there would be coma and more or less general loss of ability to direct and control the forces of the body. The working hypothesis I have laid down embraces all such cases. The opening in the skull just in front of the auditory meatus will expose the middle meningeal artery which is the source of the trouble nearly always. Violence applied to almost any part of head is liable to rupture that artery. It will bleed slowly usually and its clot will compress the brain gradually. Your patient will almost always have a sense interval between the concussion symptoms incident to the reception of the violence and the development of coma and other symptoms of cerebral compression.

Preparatory to opening the skull there should be careful cleansing of scalp. The field of operation, that is the side of the head from sagittal to mastoid ought to be clipped or shaved and the skin thoroughly washed with soap and alcohol.

Then make a horse shoe shaped incision and turn down the flap over the ear, apply the crown of trephine to smoothest place you can find and proceed with great caution to twist out a button of bone. This may be the thinnest skull ever and the crown of your trephine go crashing irreparably into the brain if you are not careful to lift the instrument after every turn or two. I test the depth and resistance of the cranium to my instrument by inserting an elevator into the groove and using it as a lever to pry out the button. Some surgeons pound or knock the button loose after it is sawed sufficient, but I think that bad practice, for the brain does not tolerate concussion well always. I have plugged the middle meningeal artery with a sterile piece of cork and have tied it to control the haemorrhage from it. It is the vessel that gives you most concern in gaining access to skull cavity and should receive your respectful consideration. In the main all injuries of internal organs of head should have the benefit of cranial drainage as above described.

#### MONTCALM COUNTY.

The annual meeting of the Montcalm County Medical Society held at Greenville on the 12th of October was one of the largest and most interesting in the history of the society. Nearly every one on the program responded and five new names were added to the membership.

The officers elected for the ensuing year are as follows:

President-John Avery, Greenville.

First Vice-President-F. R. Blanchard, Lakeview.

Second Vice-President-W. R. Gamber, Stanton.

Third Vice-President—Jay O. Nelson, Howard City.

Fourth Vice-President—R. H. Blaisdell, Sheridan.

Secretary-Treasurer-H. L. Bower, Greenville.

Dr. F. R. Blanchard read a paper on "Anaesthetics" and Jay O. Nelson read one on Medical Treatment of Appendicitis."

H. L. Bower, Sec.

# MEDICAL TREATMENT OF APPENDICITIS.

JAY O. NELSON, Howard City.

Having become somewhat hardened to surprises through long years of practical experience stands me in good stead, when I receive an invitation to attend the Montcalm Co. Medical Society and find therein my name in very prominent type, promising to tell the assembled disciples of Escalapius something about some bodily ailment, which has been thrashed through the machinery of the medical and surgical journals, societies innumerable, and which subject would seem to have received the attention deserved, and conclusions arrived at which would settle for all the vexed question. But so long as human beings have a wholesome disregard and horror of having the abdominal cavity tampered with, just so long will the operation in all cases of appendicitis not become popular. And it is very gratifying to see such men as Robert T. Morris modifying their views upon the subject of interval operation in this disease, and only advising it in those cases where the tumor can be palpated. And he even makes the startling assertion that unless the surgical service is very competent, the cases of acute appendicitis are safer under the ice, opium and starvation treatment. Surgeons are not always wholly consistent, and I recall a surgeon friend of mine in the early 90's, and who was very prone to operate upon all cases of appendicitis, himself resisting operation when competent service was at hand until ten inches of the gut was gangrenous, and general septic peritonitis fully established. Allow me to place myself in the right light before my fellow practitioners. I certainly do not wish to put myself upon record as not favoring appendicitis operations. My hospital training was distinctly surgical, and my ambition lay in that direction. I only speak for conservative work. It is my opinion that since Drs. Henry Sands and Chas. McBurney took up the subject, and made it an especial operation, that it has saved more lives than any other one surgical procedure. It has done something else. It has made accurate diagnosis an imperative necessity, and thereby raising the standard of physicians from the old empirical pill and drop giver to a scientific diagnostician.

As I look back upon the years of my child-hood spent in a small country village in Ohio,

it is hard to recall what the inhabitants died of. It was generally conceded to be "inflammation of the bowels," "peritonitis," a "run of fever," and my conclusion is that if those early country doctors had insisted upon autopsies, they would have found conditions existing inside the abdominal cavity that they "wot no of."

General Pathogenesis.—The vermiform appendix is a glandular organ presenting a certain analogy to the tonsils, and liable as well to follicular, mucous, submucous, infectious, exudative, and ulcerative disorders. And as some people are more liable than others to have follicular inflammations, so some people are somewhat predisposed to have follicular and catarrhal inflammations of the appendix.

Etiology.-I am fully convinced that the basis of nine-tenths of the cases arise from over-eating, insufficient mastication, and overindulgence in alcoholics, the first two causing constipation, and the latter congestion, poor digestion, and paralyzes the muscular coat of the bowel. The fact that this condition furnishes an excellent culture medium for the bacilli coli communis often completes the cycle of causes which set up an acute inflammatory condition in the appendix. I am not a believer in concoctions and foreign bodies being the primary cause, but after a catarrhal congestion should there be a concretion in the distal end, it is held there by the swelling of the mucous coats, acts as a foreign body. The catarrhal condition goes on to ulceration, perforation. Those which do not perforate have a strictural condition with the foreign body as a constant irritant, preventing involution, and consequent safety from recurring attacks. The fulminating cases we need mention but not discuss.

Medical Treatment-Is only of value within a few hours of the initial pain; the sooner the better. I would say not later than 6 to 10 hours, and certainly not after any signs of abcess formation are present. My method of procedure is to order calomel, gr. j; sodii, bicarb, gr. j, every hour for four doses; a low large enema of warm soap-suds at once. External applications of wet hot cloths repeated every 10 or 15 minutes. Should the low enema not be satisfactory, a high enema of hot soap-suds is given. Should these measures not show conclusive definite results in from 6 to 8 hours, that, is the acute pain subsiding, point of tenderness diminishing or disappearing, with pulse and temperature showing improved condition, then a radical change in the treatment must be instituted, substitution of ice bag or leiter coil to the abdomen, starvation treatment, enemas for bowel action, normal saline solution by rectum for thirst, and a general and expectant line of treatment, and careful watch for any abscess formation when, of course, surgical measures must be instituted.

In regard to the use of an opiate it is an absolute necessity in some cases, but should be withheld until the last dose of calomel given if possible. I feel that it is safer to dull the pain than it is to allow the patient to throw him or herself about in agony. So long as the attending physician does not allow his own diagnostic abilities to become dulled at the same time, the danger is not added to. I certainly believe that by quieting the muscular spasm, we put the part in the best condition possible for improvement. One thing I do insist upon, that is hypodermic medication, never leave morphine or opium to be given at the discretion of friends of the patient. They are most apt to allow their sympathies to lead them into error, and create conditions which the physician finds very hard to correct.

#### ANAESTHETICS.

#### F. R. BLANCHARD, LAKEVIEW.

From the earliest ages attempts have been made to relieve pain by the induction of insensibility. Homer records the use of cataplasms. The Egyptians were acquainted with the soothing effects of Nepenthe. The Chinese were also accustomed as early as the third century to produce insensibility during surgical operations by the use of Indian Hemp.

The most potent anaesthetic known to the ancients was mandragora, a half ounce of an infusion in wine would render one insensible to the pain of an amputation. The sleep thus produced might continue for several hours, hence, no doubt the origin of the story of the sleep of Juliet as recorded by Shakespeare.

The Jewish women were in the habit of giving this anaesthetic to the victims of crucifixion, hence the origin of the "wine mingled with myrrh" as recorded by St. Mark.

While Dante was writing the Inferno, Theodoric, a surgeon of Bologna, taught the art of producing insensibility by inhalation of the vapor wielded by a medicated sponge that had been steeped in a decoction of opium, belladonna, hyoscyamus, mandragora, hemlock, ivý and lettuce.

It is probable that the alchemists knew of the

anaesthetics properties of ether and alcohol. The closing years of the last century were marked by a remarkable apathy regarding the use of anaesthetics.

As early as 1785, Dr. Pearson of Birmingham had inhaled the vapor of sulphuric ether but without practical results.

In 1799, Humphrey Davy, laboratory assistant of Dr. Beddoes, in the Pneumatic Institution at Clifton near Bristol discovered the exhilerating properties of nitrous oxide gas. He recorded his experience with this comment, "as nitrous oxide in its extensive operation seems capable of destroying physical pain, it may probably be used with advantage in surgical operations, in which no great effusion of blood takes place." Though widely circulated this seems to have produced no practical results.

During this long period of time, no systematic research had been undertaken with a view to the discovery of a method for the production of artificial anaesthesis.

Dr. Warren, of Boston, had used sulphuric ether for the relief of asthma in 1805.

In the year 1839, Dr. Long, of Jefferson, Georgia, administered it to a patient for the removal of a tumor of the neck, and during 1842 and 1843 he administered it several times, but as he lived in a remote part of the country and published no statement, his discovery was of no use to the scientific world.

About this time a young dentist of Boston, Dr. T. G. Morton, had been experimenting with ether, and on Oct. 16, 1846, he administered it to a patient from whom Dr. Warren removed a tumor of the neck at the Massachusetts General Hospital. The experiment was a success, and was again and again repeated. Intelligence of the great discovery soon reached England and was speedily diffused throughout the civilized world. In the following year, the celebrated physiologist Flourens described the effects of chloroform on the lower animals. About the same time a medical student in London, Furnell, discovered its anaesthetic properties, and at his suggestion it was employed several times at St. Bartholemew's Hospital. The agreeable qualities of the new anaesthetic soon led to its adoption in preference to ether.

Since that time many new substances, used as anaesthetics have been discovered, such as, cocaine, eucaine, ethyl chloride, methyl chloride, ethyl bromide, Schleich's solution, etc., but ether and chloroform seem to be the only two which have stood the test of time and of these two the preponderence of evidence seems to be that ether

is the safest. In certain conditions chloroform is preferable, as in nephritis, in children under 6 years of age, in cases of an emergency where the patient has recently ingested solid food, or where ether has been administered before and some serious symptoms developed.

Until science brings forth some new substance which answers every purpose of an ideal anaesthetic, these two, ether and chloroform will continue to hold first place in the surgical world.

#### OTTAWA COUNTY.

At the regular annual meeting of the Ottawa County Medical Society, the following officers were elected:

President-Dr. B. B. Godfrey.

First Vice-President-Dr. R. J. Walker.

Second Vice-President-Dr. E. De Spelder.

Secretary-Dr. E. D. Kremers.

Treasurer-Dr. J. J. Mersen.

Delegate-Dr. H. Kremers.

Alternate-Dr. D. G. Cook.

Board of Directors—Drs. T. G. Huizenga, E. De Spelder, J. A. Mabbs, B. B. Godfrey, J. W. Van Den Berg.

A very interesting symposium on obstetrics was given and a large and enthusiastic meeting was held.

E. D. KREMERS, Sec.

#### PRESQUE ISLE COUNTY.

The annual meeting of the Presque Isle County Medical Society was held at Onaway, Wednesday, Oct. 4th, at which time the following officers were elected:

President—DeWitt C. Howell, Onaway.

Vice-President-John Young, Onaway.

Secretary-Treasurer—Wm. W. Arscott, Rogers City.

Delegate-DeWitt C. Howell.

Alternate-John Young.

Resolutions of condolence were adopted regretting the loss of our beloved friend and associate, Dr. Edward Erskine, of Rogers City, who died suddenly August 10th.

WM. W. ARSCOTT, Sec.

#### SAGINAW COUNTY.

The annual meeting of the Saginaw County Medical Society was held in the City Hall, Saginaw, Mich., Oct. 3rd, 1905. The following officers were elected:

President-B. B. Rowe, Saginaw.

Vice-President-E. E. Curtis, Saginaw.

Secretary-Treasurer—P. S. Windham, Saginaw Directors—W. L. Dickinson, Fletcher S. Smith, and J. W. McMeekin.

Delegate to State Society-W. L. Dickinson.

Alternate-B. B. Rowe.

The report of the secretary showed a membership of thirty-eight, and a balance of \$11.02 in the treasury.

The retiring president, W. L. Dickinson, gave a short address on "Good and Welfare of the Society." Dr. O. P. Barber read a paper on "Pure Water and How to Obtain it for Saginaw."

Abstract:

"I am satisfied that the way is at least open, whereby we can practically and economically obtain what we have so long needed in Saginaw, absolutely pure water.

"The method consists in brief of placing in a proper chute electrodes standing close together through which the water runs. These electrodes are surrounded by a magnetic field. A direct current is brought in contact with the electrode, and an alternating current with the magnets.

"It electrocutes, then, so to speak. This can be readily understood beyond a doubt, when one witnesses the combined action of the two currents generating in enormous quantities nascent oxygen and hydrogen, which destroys then and there all bacteria, leaving the water surgically sterile.

"In fact, the product is the acme of sterilization, producing the purest water known as soft as pure rain water, and the most palatable water ever tasted. Spring water in comparison is raw water.

"You will excuse me if I seem to be extra enthusiastic over this electromagnetic method of producing pure water, but, it certainly is pardonable when you think that water taken at any time directly from our river can be furnished to our citizens as soft as the softest rain water, and absolutely clean and clear and palatable, and free from any chemicals or bacteria. And then so surgically sterile that it can be used for any surgical work, and all this, too, at a more economical price, (as has been many times demonstrated), than by any other process.

"This process is not experimental; it has been demonstrated in various places, notably New York, on all classes of water, namely sewage, factory waste and all kinds of pollution. It has now reached the practical and economical stage and the cost to place a plant in a city of this size will be but little more, including filtration, than would be charged for an ordinary so-called filtration plant. When installed, it has this addi-

tional advantage, that there are no chemicals to continue buying for coagulating purposes.

"In discussing the chemical question with me, a layman actually argued that the chemicals would destroy all germs, but you medical men must know how preposterous such a contention is. Further no filtrate completely removes the chemicals from the water, and the use of it would in time work injury to the health of a community.

"In fact, the strength of this solution would be deadly, its cost prohibitive, and I only speak of it here to show you how little knowledge is held by the public generally on this subject, and how necessary it is that we medical men realize that we owe it to the public to educate them on this subject.

"As to the cost, a plant with a million-gallon capacity would cost this city between \$15,000 and \$20,000, with no further expense except that of maintenance. Further, the company owning the patent makes the proposition that they will install a trial plant of 250,000-gallon capacity, which would demonstrate their work, at a cost of \$5,000 and guarantee to produce the following result: Absolutely pure water, free from all kinds of biological and bacteriological impurities, with the understanding that when they have accomplished and demonstrated this result the city would contract for a plant to treat their entire supply, the price of this initial plant to apply to the complete plant to treat the entire supply."

P. S. WINDHAM, Sec.

#### SCHOOLCRAFT COUNTY.

The Schoolcraft County Medical Society, at its annual meeting, passed resolutions condemning the practice of druggists in refilling prescriptions without the physician's written order. It was also decided that on and after January 1st, 1906, no members of the county society will make insurance examinations for fraternal or other societies for less than the sum of \$2 for each examination.

G. M. LIVINGSTON, Sec.

#### ST. JOSEPH COUNTY.

The following paper was read before St. Joseph County Medical Society Oct. 10, 1905:

# UTERINE FIBROMA, WITH REPORT OF A CASE.

Blanche M. Haines, Three Rivers.

Fibroid tumors, although classed as benign growths, occupy, when they develop in the uterus, a borderland between benign and maliginant tumors. Complications of pain, serious hemorrhage, sarcomatous or other malignant degeneration, and pregnancy render these tumors of the uterus a menace to the lives of one-third of all women who possess them.

The etiology of fibroid tumors is, like the causes of other tumors, both malignant and benign, a still undiscovered country, a fruitful field for pathological research in the future as in the past.

Fibroid tumors conform to the rule of all tumors, and are made up of the same histological elements that the mother tissue is, or the tissue from which they spring, namely, muscle, connective fibrous tissue and blood vessels in varying proportions.

Whether we accept as the cause of tumors, the embryonal cell theory of Cohnheim, which originates them in foetal life with a quiescent period until their growth begins, or the parasitic theory of a later day, speculating on the protozoa as a cause, or the autotoxic hypothesis, which finds in a faulty metabolism an origin. Whether we accept or not any of these theories, the following law applies to tumors as to many other pathological processes, namely, that a diminished resistance is an etiological factor in their development, consequently, certain pathological processes in the uterus diminishing resistance, may be contributory causes in the development of uterine fibroids.

William H. Byford said, more than twenty years ago, that "Great hyperemia of the uterus predisposes to fibrous tumors of that organ, and they are associated with sterility, dysmenorrhoea, menorrhagia, and mal-positions of the uterus."

These symptoms, we know, are in turn associated with uterine inflammations. Uterine displacement is preceded by uterine inflammation. We have yet to see a case of malposition of the uterus which is not accompanied or preceded by inflammation of the organ. Old versions and flexions show, invariably, hyperplasia of uterine tissue.

Mary Dixon Jones asserts that "when there is a myofribroma not only is the uterus diseased, but it is the disease of the uterus that produces the fibroid growth." "Inflammations elsewhere in the body are followed by fibrous connective tissue," as we observe in scars in fibrous bands after appendicitis, pleuritis, injuries and other inflammations. Fibrous tissue is, then, the aftermath of an inflammation.

Race is a predisposing cause. Fibroids are more common in the black than in the white

race. In a very limited practice among negro women we have to report three gynecological cases in private practice, two of which had fibroid tumors of the uterus. The third patient was only one-quarter negro. The nulliparous woman is more apt to have fibroids, than the woman who has borne children; likewise the nulliparous woman is more apt to have a pathological uterus to which the sterility may be due. The active menstrual life of the nulliparous woman, without the normal breaks and rests of pregnancy and lactation, predispose to pathological conditions of the uterus.

We have this sequence in fibroids of the uterus, an inflammation or hyperemia or malposition of the organ followed by a fibroid growth, and enlargement accompanying the growth of the tumor, an increase in the size and depth of the uterine cavity, with a corresponding increase in the endometrium giving that much hemorrhagic surface and accounting in a measure for the hemorrhages of these tumors. Although the increased growth of the blood vessels in the tumor is a factor in the hemorrhages, the soft or myomatous tumors are more apt to be accompanied by bleeding. They grow faster, have less connective tissue to support the walls of the blood vessels and yield to variations in blood pressure easier. The submucous tumor for the same reason is more frequently associaated with hemorrhage.

The symptom of pain is due to the increase in size, and the pressure from that cause and the contractions of the uterus similar to that in dysmenorrhea or labor pains.

Prognosis.—John G. Clark, of Philadelphia, estimates 2 per cent. of all fibroid tumors as associated with malignant processes. While Penrose estimates 18 per cent. of changes and degenerations which threaten life, and Noble, of Philadelphia, estimates a mortality of over one-third of all unoperated cases. Multiple tumors are more likely to become malignant.

Pregnancy is a grave complication occurring in these cases. The gravity depending on the situation and type of growth. Pregnancy does not occur so frequently in these cases, owing to the coexisting diseased endometrium, but an amelioration of the endometritis may be followed, as in uncomplicated endometritis, by pregnancy.

The type of tumor which is most apt to be so complicated is the interstitial variety, situated in the middle third of the uterus and which is fortunate for the prognosis. This type giving fewer complications at delivery.

Fibroids predispose to abortion, but if a case goes to term the delivery may be entirely normal. Post partum hemorrhage or rupture of uterine wall may be possible complications.

A tumor in the lower segment of the uterus or the submucous variety may cause mechanical obstruction to labor, and these are most apt to be attended by hemorrhage because of interference with uterine contractions.

Another feature of these cases is that the tumor grows with the growth of the pregnant uterus, so that we have a larger tumor mass at term than we started with. Fibroid tumors develop as a rule during the menstrual life of a woman and undergo involution at the time of the menopause along with the involution of the uterus. There are exceptions to this rule, and we find them persisting and growing after the change. But occasionally we find a uterus which does not atrophy after the menopause. The menopause is frequently retarded by the tumor.

A similar involution of tumor and uterus may follow labor. Howitz, of Copenhagen, observed the involution of fibroid tumors after labor, and advised prolonged nursing as a factor, and even advised artificial stimulation by means of aspiration of nipples. W. H. Byford reports three cases of disappearance of tumors after parturition..

L. H. Duming, of Indiana, reports a fibroid the size of a lemon in the anterior wall of uterus, which after a miscarriage of seven months diminished in four months to the size of a walnut.

The case we have to report is as follows: Mrs. M. White, American, age 29, came to me for treatment in the summer of 1894. She had been married about one year. She gave a history of dysmenorrhea and profuse menstruation from the establishment of the menstrual function. She had a chronic constipapation and had been frail in her early girlhood. A few months prior to the time she became my patient the dysmenorrhea had increased and pelvic pains were present more or less at all times. I found on examination a retroflexion of the uterus, a metritis and endometritis with enlargement of the uterus, a cervical erosion and a purulent discharge. Under local and general treatment the inflammatory symptoms subsided. The retroflexion remained, but, save for the dsymenorrhea, did not cause trouble.

The four consecutive autumns of '95, '96, '97

DECEMBER, 1905.

and '98 she had attacks of dysentery with bloody discharges and fever. We saw no relation in these to the pelvic conditions, but give them as they occurred. Her condition remained unchanged until the summer of 1898.

I met her on the street after an absence of seven months, her pallor and emaciation were extreme. In a few days she presented herself for examination, and I found a fibroid tumor in the right anterior middle third of the uterus. The tumor was as large as an orange. She complained of pain in the right iliac region, and constant hemorrhage with excessive hemorrhage at the menstrual period. Fl. Ext. Ergot (Squibbs) was prescribed with instructions to take 15 gtts. every four hours, increasing the dose a few drops each day until 30 gtts. or possibly dram doses were reached. Rest in bed was ordered during the menstrual period, and the patient was watched for ergotism. It developed in October; a severe and alarming gastritis occurred on the 30 gtt. doses of ergot, and it was withdrawn. The hemorrhage ceased during the rest in bed. necessitated by the gastritis. Hysterectomy was not advised at this or any subsequent time, but was considered. Fluid Hydrastis (Merrill's) was now substituted for the ergot in half dram to dram doses t. i. d. The general improvement was marked. No more intermenstrual hemorrhages occurred, although the menstrual flow was profuse for several months, but gradually lessened and the pains also. When the pain was present, equal parts of Liquor Sedans (P. D. & Co.) and Hydrastis were prescribed.

The Hydrastis was continued a year and a half, until she gave a history of no dysmenorrhea. Examination at this time, 1899, revealed an absence of retro-flexion, but a tumor the size of a foetal head at term.

June, 1900, found her again in bed with nausea and vomiting, which was excessive, tongue red, and suppression of menses. A diagnosis of pregnancy was made. She was bedfast six weeks with the nausea and vomiting, but slowly improved, and her pregnancy was, henceforward, normal except for a severe attack of hemorrhoids in the last month of it. These she had never had before, and has never had since. We ascribe them to the pressure of the tumor and foetal mass and the resulting interference with pelvic circulation.

On the evening of Feb. 18, 1901, she entered on her labor as a primipara, age 36, with a fibroid tumor the size of a head filling one side of the abdomen. The pains were strong

and dilating until dilatation was complete at 3 p. m. on the following day, Feb. 19. The expulsive pains were not so effective, and were more wearing in character and fearing possible rupture of the uterus, I sent for Dr. T. J. Haines. He immediately administered chloroform, and at 5 p. m. I delivered, with forceps, a 9-pound girl. A laceration of the perineum was repaired immediately. Immediately following the birth of the child, while busy resuscitating it, I directed Dr. Haines to see that the uterus was contracting. He, unacquainted with the size of the tumor, announced that we had yet another foetus to de-And following the outlines of the uterus through the abdominal walls, we found it reaching almost to the sternum. After the delivery of the placenta, the fundus was found. midway above the umbilicus, between it and the ensiform cartilage. The mass was uterus and tumor. No unusual hemorrhage followed the delivery. Theorizing that the increased blood supply of pregnancy would cause an increase in the size of the uterus, I directed a long convalescence in order that the involution of the uterus in the lying-in period should be favored in every way, hoping for a simultaneous involution or reduction of the fibroid tumor. In addition a position in bed on sides and face, instead of back, was directed to counteract any tendency to retroversion and flexion.

The involution theory worked out nicely. A year later, no medicine or treatment having been given in the interim, an examination revealed a normally placed uterus, free from inflammation, with a small fibrous mass to the right no larger than an egg. The pain in the right iliac region had ceased.

She was again pregnant in 1903, and aborted at the third month with considerable hemorrhage. No distinct tumor could be distinguished at that time. At this date, Sept., 1905, she assures me she is well, free from dysmenorrhea, has a normal menstrual flow, and is sure she has no tumor and that she is a normal healthy woman.

Treatment:—An operation was never advised in this case. First, because this woman was an important and necessary individual in her home, another invalid depending on her.

Secondly, palliative and medicinal measures removed the complications of hemorrhage and pain. The indications for operation in fibroids are hemorrhage, pain, a rapidly growing tumor or multiple tumors, one in the lower segment of the uterus or a submucous one.

Subserous or intramural tumors of small size, not complicated, are not always material for the surgeon.

The early history of operations on fibroids was bloody and fatal. The first case operated upon in 1829 by Granville died. Emmet gave in 1884 a death rate of 47 per cent. in 359 hysterectomies for fibroids. Even at late as 1904 Noble, of Philadelphia, while giving a mortality or 2 per cent. for the operation in uncomplicated cases, gives a mortality of 30 per cent. in graver complications, and admits that he does not advise immediate operation in small subserous and intramural tumors. Howard Kelly urges the conservative operation of myomectomy in suitable cases, as it conserves the uterus. The uterine hyperthrophy undergoes involution in the convalescence from the operation. This operation is frequently complicated with hemorrhage.

The history of the case reported coincides in many respects with the observation of other observers. The pre-existing inflammation predisposed to the fibroid growth. A unique feature of this case, which we have not seen paralleled, was the mechanical effect of the tumor in the anterior wall, lifting up the fundus of the uterus as it increased in size, and correcting the retro-flexion.

The hydrastis given for its special action on unstriped muscular fibre with a view to its hemostatic effect, by virtue of its effect in stimulating glandular activity improved the endometritis. The endometritis and retroflexion removed pregnancy occurred, and the involution of the tumor resulted, as Byford, Howitz and Dunning had observed in other parturient cases, and our fibroid disappeared in consequence of the pregnancy.

#### WAYNE COUNTY.

Annual Address of Retiring President. Guy L. Kiefer, Detroit.

You have just listened to a most interesting report of the Petoskey meeting of the State Medical Society by one of your delegates, Dr. Hitchcock, and you have been treated to a most delightful trip to Portland and return, together with an account of the meeting of the American Association by Dr. Robbins. I do not believe that you are in a mood to listen to a lengthy and more or less scholarly address on some far off subject by the retiring president.

Under these circumstances I have decided to exercise my presidential prerogative for the last time and rule that the address as announced by the program is out of order. In its place, however, I deem it proper to give you a brief report of the work of the Wayne County Medical Society during the past year.

The plan of holding meetings as prescribed by the new constitution was inaugurated with the first meeting last September. The general meetings were accordingly held on the first and third Mondays of each month and the section meetings on the second and fourth Mondays respectively. This innovation was a decided success, the average attendance at our meetings during the year being 74, as compared with 56 the year previous.

The papers presented during the year were very instructive and enjoyable, and they were made particularly interesting by the careful arrangement given them by the program committee. The work was arranged in such a manner that papers on certain subjects would follow each other systematically, so that for example one month would be devoted to a study of diseases of the kidney, another to acute infectious diseases, and so on.

The society was fortunate in securing papers from noted men from outside of the city, among them being Dr. Robert T. Morris, of New York, Dr. H. P. Anderson, of Toronto, Dr. Elliott, of Muskoka, and Drs. McMurrich and Huber, of the University of Michigan.

The social feature of our meetings received more than usual attention. A number of the regular meetings were followed by an enjoyable buffet luncheon, and it is more than possible that this social feature has something to do with the increased attendance at meetings.

In spite of the fact that your program committee expended considerable money for midnight lunches, served after meeting to its members, the report of the treasurer will show that there is a balance of \$325.00 in the treasury to-day, as compared with \$250.00 a year ago, and when you consider that \$100.00 was voted by the Board of Directors to the Defense League, the difference becomes all the greater.

The membership has been considerably increased during the year, sixty new members having been admitted, bringing our total membership at present up to nearly 400. This statement brings to mind the fact that there are still remaining in Wayne County over three hundred regularly registered physicians who would make desirable members and it may not be out of place for me to suggest that a special effort be made during the coming year to secure as many of them as possible. I

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would recommend, if you please, that a membership committee be appointed whose special duty it shall be to look after new members. In making this suggestion I wish to repeat what I said a year ago, that each member should endeavor to get his neighbors and friends who are not members of the society, to join at once.

Besides the regular routine work of the society several innovations were introduced during the year. At the suggestion of Dr. Tibbals the Defense League of the Wayne County Medical Society was organized. Although the league has done quite well in securing members, there are still a number of members of the society who have not joined the Defense League. All who have not done so, should do so at once, as the league, which is officered and managed by members of this society, offers to its members as safe and good protection for five dollars a year as they can obtain from the various private corporations throughout the country for four or five times that amount.

Another new feature of the work was the First District Councilor Meeting, which was held upon the suggestion of Dr. Leartus Connor. A meeting of the county societies comprising the first councilor district, viz.: Macomb, Lenawee, Monroe, Oakland, Washtenaw and Wayne, was held in Detroit on February 20th of this year. There were 155 physicians in attendance. During the morning session there was a very interesting symposium on "Croupous Pneumonia," and the afternoon session was made lively by a symposium on "Appendicitis," which brought out a most instructive discussion. In the evening a dinner was served which was attended by nearly 160, and during the feast of reason which followed, every county was heard from by some representative present. It was decided to make the Councilor meetings an annual event and Ann Arbor, Michigan, the home of the Washtenaw County Society, was decided on as the place of meeting for next year.

The Board of Directors have given the matters of the society their earnest thought and attention during the year.

On the whole the year has been a successful one, and I believe that much of the success is due to the untiring work of the program committee and particularly to its energetic chairman, Dr. Hirschman.

The president has endeavored to do his share of the work by attending the meetings of the society, and also those of the board of directors regularly, and by carrying out such suggestions as presented themselves from time to time. It was my pleasure to be present at all of the meetings and I feel that I profited much by this privilege.

I now take pleasure in calling to the chair as my successor in office, Dr. A. E. Carrier.

#### THIRD COUNCILOR DISTRICT.

The Third Councilor District Medical Meeting held at the Sanitarium in Battle Creek, October 18, was in every particular an unqualified success. More than two hundred doctors were in attendance, coming not only from the district itself, which was well represented, but from all parts of the state as well.

The program, consisting largely of clinics, was well carried out. Many important cases were presented. Dr. J. H. Kellogg threw open his perfectly appointed operating rooms and did several surgical operations, demonstrating his new method of round ligament shortening, showing how easy it is to locate the ligaments, also demonstrating his method of uterine curettage, followed by cauterizing with live steam, his practical perinorrhaphy, cholecystotomy, etc. Dr. J. F. Boynton removed the nasal septal cartilage by submucus resection-local anesthesia. Dr. R. D. Sleight did a strabismus operation and a very beautiful one for transplanting pterygium. Dr. W. H. Haughey demonstrated the use of his Eureka suture by showing results in a recently operated hernia closed with it, and a case of serious cut from point of chin to angle of jaw with suture in sito, after which by the courtesy of Dr. Kellogg he closed a laparotomy incision, thus demonstrating his method of introducing the suture.

The above surgical work, together with the large, varied and interesting clinic presented by Drs. Kingsley, of Centerville, Doyle, of Augusta, et al., completely filled the entire time of the morning session.

At 3:00 p. m. the following scientific program was carried out:

"The Significance of Itching and an Analysis of Methods Suggested for its Relief," Dr. A. P. Biddle, Detroit.

#### Calhoun County-

"Reflex Convulsions of Children, and the Duty of Physicians to Prevent Occurrence as Well as Treat," Dr. A. H. Burleson, Tekonsha.

Cass County-

"A Case of Intestinal Obstruction," Dr. W. M. McCutcheon, Cassopolis; "Conservative Surgery," Dr. M. P. White, Dowagiac.

Eaton County-

"Pregnancy, Diagnosis; Hygiene of Pregnancy; Delivery and After-Treatment," Dr. F. H. Weaver, Charlotte.

St. Joseph County-

"Differential Diagnosis of Common Abdominal Diseases," Dr. L. K. Slote, Constantine. Each paper was a triumph in its line and received well merited discussion. After the scientific work was finished, guides were provided, and all who wished to do so formed parties, and were conducted around the wonderful Battle Creek Sanitarium, where many saw for the first time the immensity of the institution, the comprehensive nature of its

work, and the perfection of its appointments. At 7:00 p. m. all were taken to the beautiful dining-room on the sixth floor, where a sumptuous vegetarian banquet was enjoyed. Some very thoughtful and exceedingly appropriate remarks were here made by Dr. David Inglis, president of the Michigan State Medical Society. He called attention to many things doctors should do, not failing to give credit where credit was due for what already had been These remarks brought out others from Dr. J. H. Kellogg and Dr. Eugene Miller, of Battle Creek, and Drs. M. Willson, of Port Huron; W. T. Dodge, of Big Rapids; B. H. McMullen, of Cadillac; A. E. Bulson, of Jackson; A. H. Rockwell, of Kalamazoo; A. P. Biddle, of Detroit, and R. H. Spencer, of Grand Rapids.

After which, amid a general hand-shaking and well wishes, the exercises came to a close. Many were the compliments received by the promoters of this meeting, all declaring that the first meeting of the Third District was an unqualified success, comparing favorably with any yet held in the state.

#### PATENT NOSTRUMS.

The following resolution, proposed by Dr. A. S. Kimball, of Battle Creek, were adopted at the meeting of the Third Councilor District, Oct. 18, at Battle Creek.

Whereas, The American people are being daily humbugged, robbed and poisoned by venders of patent nostrums

and that, largely through the medium of the press; and

Whereas, Through their fearless, scathing and denunciatory editorials, their concise analyses and clever exposures by their contributors, Collier's Weekly and The Ladies' Home Journal are doing immeasurable good in their praiseworthy campaign against this "American Fraud," be it

Resolved, That this meeting of the Third Councilor District of the Michigan State Medical Society extend its heartiest thanks and most earnest commendations to P. F. Collier & Son and Curtis Publishing Co. for this splendid work; and be it further

Resolved, That copies of these resolutions be furnished the editors of Collier's Weekly, The Ladies Home Journal, The Journal of the American Medical Association and The Journal of the Michigan State Medical Society.

# Medical Mews.

Charles Bowman Morden, M. D., of Pigeon, was married to Miss Jessie Louise Strong at Adrian, Mich., Oct. 10. 1905.

Patience S. Bordeau, M. D., was married to Henry N. Sisco at Grand Rapids, Sept. 6, 1905.

Geo. Monroe Livingston, M. D., was married to Miss Mabel Augusta Joy at Albion, Mich., June 28, 1905. Address Manistique. Fred Hopkins Harris, M. D., of Kinderhook, Mich., was best man.

W. H. Hutchings, M. D., of Ann Arbor, has removed to 50 Lafayette ave., Detroit.

Augusta Rosenthal Thompson, M. D., of Traverse City, has opened offices at 26 Bagg st., Detroit.

Warren P. Elmer, M. D., who was assistant in Internal Medicine at the University of Michigan, has this fall been appointed instructor in medicine in the University of St. Louis.

Allen Roy Cooper, M. D., Banfield, was married Oct. 3, 1905, at Battle Creek to Miss Verna Davis.

Lewis O. Ludlum, M. D., of West Branch, Mich., died at Ann Arbor, Oct. 9, aged 70.

Cholera is reported in Warsaw, Lodz and Lomsha, three districts of Russia. There were 27 cases and 17 deaths between Sept. 1-10.

One hundred monkeys have been shipped to Breslau for Prof. Neissler's experiments on syphilis.

During the week ending Sept. 2 there were 70 cases of cholera in Manila with 56 deaths. In the following week there were 78 cases and 69 deaths. Up to Oct. 14 there had been 713 cases in the Philippines with 553 deaths.

Twelve milk dealers in Boston and one vinegar manufacturer were recently fined \$10 each for adulterating their produce.

Edward Erskine, M. D., of Rogers City, died Aug. 10, 1905.

Dr. Frank K. Owen, of Ypsilanti, died Oct. 14, 1905.

Dr. Minta Proctor Kemp has removed from Sault Ste. Marie, Mich., to 26 Bagg street, Detroit, where she will continue general practice. Dr. Kemp was a member of the staff of the Northern Michigan Asylum for several years before taking up practice at Sault Ste. Marie.

Dr. R. J. Conroy, of Battle Creek, recently returned from Ireland and London.

Drs. Nelson McArthur, Robt. A. Jamison and W. E. Wells, all of Detroit, sailed recently for Europe where they expect to take post-graduate work.

Dr. Ray E. Stone, of Detroit, has gone to Chechuahua, Mexico, to take charge of the hospital of the DeLoies Gold Mining Co.

Dr. W. K. West, Michigan delegate to the American Medical Association, has resigned his position on the Calumet & Hecla medical staff and accepted the position of Chief Surgeon of the Copper Range Mining Company, and has removed to Painesdale, Mich., their headquarters.

Professor Charles B. Nancrede, of the depart-

ment of medicine and surgery in the University of Michigan, read a paper, by request, before the meeting of the White River and White Mountains Medical Associations, held Sept. 13th, 1905, at the Dartmouth Medical College Hospital (the Hitchcock Memorial Hospital). Dr. Nancrede holds the chair of surgery in that school, as well as the same one in the University of Michigan. The subject was "Eight Cases Illustrating the Chief Points in the Surgery of the Large Bowel."

## Miscellaneous.

CHANGES IN MEMBERSHIP. Sept. 15 to Nov. 1.

NEW MEMBERS.

Lindgreen, Ilmar, Neguanee. Bonnerville, A. E., Alpena. Goodman, N. A., Harvard. Jacobson, L. C., Sheridan. Fratic, F. J., Greenville. Lewis, Geo. H., Greenville. Fogleson, M. P., Harvard. English, Wm., Saginaw. Monfort, I. N., Ithaca. Monfort, Willard, Ithaca. Gleason, J. F., Detroit. Downing, D., Detroit. Buesser, F. J., Detroit. Layton, M. A., Woodmere. Lawrence, H. P., Detroit. Cummings, R. B., Detroit. Humber, A. M., Detroit. Nester, Martin H., Metz. Cudworth, Linn M., Perry. McKnight, E. E., Alpena. Bell, S. J., Alpena. Burnam, D., Freemont. Lininger, J. W., Gladwin. Morse, J. F., Battle Creek. Ladd, L. F., Martin. Jones, B. W., Vulcan. Cruise, S. E., Iron Mountain. Carpenter, W. T., Iron Mountain. Cameron, J. D., Iron Mountain. Hebert, Per., Iron Mountain. LeBaron, R., Pontiac. Clarke, Homer, Pontiac. Case, James S., Battle Creek. Loust, E. H., Marshall. Morris, Harry, Sebewaing. Johnston, Henry, Caseville. Lyman, M. D., Bad Axe. Shaver, F. A., Grindstone.

Change of Address. Eaton, R. R., Grand Rapids. Cooley, T. B., Detroit.
Maddox, W. H., Wauseon, Ohio.
While, Julia A., Loma Linda, Cal.
Vaughan, J. W., Detroit.
Vaughan, V. C., Jr., Detroit.
Rosenthal-Thompson, Augusta L., Detroit.
Smith, Virgina T., Los Angeles, Cal.
Graun, Frank A., Duluth, Minn.
Gleason, S. M., Greenville.
Hutchings, W. H., Detroit.
Gillett, Jesse, Wixom.
Smith, M. B., Fenton.
Best, H. M., Edmondton, N. W. T.
Gibson, E. B., Ann Arbor.
Keeler, C. E., Ann Arbor.

#### IN MEMORIAM.

FRANK K. OWEN, M. D., Ypsilanti, Mich.

Frank K. Owen was born in Sweetwater, Tenn., Sept. 26, 1843. His family moved to Missouri early during the Civil War, and the young man enlisted in the 43rd Missouri Volunteer Infantry, and saw service in those days when neighbor and friend fought each other. He was several times wounded, but not seriously; however, in after years, he felt the results of the exposure.

At the close of the war he read in the office of a local physician for some time, and then entered the University of Michigan, where he graduated in 1871; married Miss Georgiana Webb, daughter of a well-known physician of Eastern Michigan, and settled in Ypsilanti.

His rise was rapid, owing to his thorough knowledge of his profession and to his genial ways and hearty sympathy. He had in a remarkable degree that intuitive genius of the successful surgeon; the accuracy, the coolness and the quick perception so necessary in an emergency; and won the respect and confidence of his fellow practitioners, which he held until the last day of the thirty-four years of his practice.

At the outbreak of the Spanish-American war, May, 1898, he was commissioned lieutenant and assistant surgeon of the 31st Michigan Volunteer Infantry; was promoted to captain and assistant surgeon in the fall of 1898, and served with his regiment during the war.

During the last year of his life he attended to his practice as usual, but pain and illness were fast undermining his constitution. In June he took an extended trip of about two months in the mountains of Western Canada, returning in August with the hope of relief, but after a few weeks of active practice, which he kept up until within four days of the end, he breathed his last in St. Mary's Hospital, Detroit.

His was a life of mercy and of usefulness, of which his widow and two sons may well be proud. EDWARD ERSKINE, M. D. Rogers City, Mich.

The death of Dr. Edward Erskine, which occurred at Rogers City on Friday, Aug. 11, was almost tragic in its nature, and has cast a gloom over the whole county of Presque Isle, where the doctor had resided for the past twenty-six years, and where his face was familiar in every home.

While conducting the teachers' examination at about 2 p. m. he was observed to go to an open window. A minute afterwards he left the room without saying a word as to being ill, went home, administered some remedy to himself, and apparently recovered; however, in about an hour he was seized with another attack, this time complaining of a sharp pain across the chest; became unconscious, and when medical aid reached him life was extinct.

Dr. Erskine was born at Port Sanilac, Nov. 18, 1854, was a graduate of Hillsdale College, and in early life enlisted in the United States Army, shortly afterwards receiving injuries which necessitated his discharge, and for which he was granted a pension. He married Miss Mary Suzula, of Paris, Michigan, in 1877, and she survives him.

In 1879 he moved to Rogers City, where he taught in the Union school for some years. He then took up the study of medicine and graduated in the Michigan College of Medicine, in 1891, since which time he has kept in the advance of his profession, having taken several post-graduate courses in Chicago.

Dr. Erskine has been County School Commissioner of Presque Isle County for eight years and County Physician for a like time, and it would be difficult indeed for anyone to obtain the confidence the people reposed in him.

Never before in the history of Presque Isle County has there been presented at any funeral such beautiful and costly floral wreaths, shields and other emblematic designs as were literally piled on the casket of the late Dr. Edward Erskine by the various fraternal orders, the Presque Isle County Medical Society, the teachers of the county and friends of the departed and much beloved doctor.

## Correspondence.

## ASSOCIATION OF STATE MEDI-CAL JOURNALS.

CIRCULAR NO. 1.

San Francisco, Cal., Nov. 10, 1905. Editor: The Proprietary Association of America, having a very strong organization, has established a Press S.

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Bureau and is now fighting the American Medical Association and the medical profession. Collier's Weekly for November 4th publishes information showing that every newspaper in the country is muzzled by this Proprietary Association.

Undoubtedly the nostrum interests, which will be hurt by the investigations of the Council of Pharmacy and Chemistry of the A. M. A., will align themselves with the "Proprietary Association," and will endeavor to hurt the medical profession and particularly the American Medical Association, if they possibly can. It, therefore, seems to me that it is imperative that we, representing state medical organizations, should make known the principal facts disclosed by Collier's Weekly. All of our members will not see Collier's; the newspapers will either be silent or will attack us and our association; our members, or certainly most of them, will not be aware of the actual facts unless the information is disseminated through our journals.

The fight promises to be an exceedingly bitter one, and it seems to me that we will fail in our duty if we do not actively support the A. M. A. and its Council on Pharmacy and Chemistry, and Collier's Weekly, and do not place before our members the essential facts. Sympathy will not win this fight, but publicity may.

Respectfully,
PHILIP MILLS JONES,
President A. S. M. J.

#### INTERNATIONAL MEDICAL CONGRESS.

I am pleased to announce that final arrangements have been perfected for the tour of the American party to the International Medical Congress at Lisbon, April, 1906.

The party will sail on Saturday, April 7, on

the North German Lloyd steamer "Koenig Albert" for Gibraltar, visiting Algerciras, Seville, Cordova, etc., spend a week in Lisbon during the Congress and returning to New York on Wednesday, May 9. This trip may be made comfortably in a first-class steamer both ways, all expenses paid, including board and lodging while in Lisbon, and entertainment at other points, for \$300.00.

A number of side trips are being added and tickets will be good returning through Europe if desired at a slightly increased cost.

Following is a list of those who have joined the

Lewis S. McMurtry, M. D., Louisville. Nicholas Senn, M. D., Chicago.

J. D. Griffith, M. D., Kansas City, Mo.

W. F. Southard, M. D., San Francisco. Frank P. Norbury, M. D., Jacksonville, Ill.

W. T. Corlett, M. D., Cleveland, O.

C. H. Hughes, M. D., St. Louis, Mo.

R. T. Morris, M. D., New York City. A. Vander Veer, M. D., Albany, N. Y.

Jos. M. Mathews, M. D., Louisville.

J. B. Murphy, M. D., Chicago.

Fenton B. Turck, Chicago.

Jas. E. Moore, M. D., Minneapolis, Minn.

Ramon Guiteras, New York City.

Dr. John H. Musser (Philadelphia) is chairman of the National American Committee, and Dr. Ramon Guiteras (75 West 55th street, New York City) is the secretary, to whom all applications for membership and communications in regard to the presentation of papers should be addressed.

All those who contemplate the trip are cordially urged to make reservation with the writer at once in order to secure desirable berth on the steamer and good hotel accommodations. Program of the itinerary upon request.

CHAS. WOOD FASSETT, St. Joseph, Mo.

#### THE LADIES' HOME JOURNAL PHILA-DELPHIA.

A. S. KIMBALL, M. D., BATTLE CREEK.

Dear Sir—Your letter enclosing a preamble and resolutions adopted by the Third Councilor District of the Michigan State Medical Society has been received, and I thank you sincerely for sending it. It is very gratifying to Mr. Bok to know that his attempt to expose some of the "patent-medicine" evils is approved of so generally throughout the country.

Very truy yours, WM. V. ALEXANDER, Managing Editor.

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## Book Motices.

A Manual of Chemistry. Third Edition. Revised throughout. For the use of students of medicine. By Arthur P. Duff, B. Sc. (London), F. R. C. D., F. I. C., Physician to St. Mary's Hospital and Lecturer on Medical Jurisprudence in the Medical School, and Frederic James M. Page, B. Sc. (London), F. I. C., Lecturer on Chemistry and Physics to the London Hospital Medical College, Examiner on Chemistry and Physics to the Society of Apothecaries, London, etc. Illustrated. W. T. Keener & Co., Chicago, 1905. Cloth, \$1.75.

A very compact little volume, intended as a guide to the study of chemistry. It is arranged especially for the medical student-leaving out all the many details contained in the larger works. The things that it is important for a well read physician to know are set forth in a pleasant and clear manner. The book is thoroughly revised and illustrated. Part one is introductory. Part two takes up the non-metallic elements individually and part three the metallic ones and their principal compounds. Part four is organic chemistry-and treats this difficult subject very thoroughly, going into the physical part of this work. The methods of determining the boiling and melting points and stereo-isomerism have been taken up in this edition. A chapter has also been added giving the composition of various recent drugs-as aspirin, heroin, mesotan, etc. The volume is very neat, attractive and useful.

Physicians' Pocket Account Book. By J. J. Taylor,
M. D., Editor of the Medical Council. \$1.00. Published by The Medical Council, Philadelphia, 1905.
This is a very convenient pocket account book
with an alphabetical index in the front and 200
pages for accounts. It is simple, plain and economical in the matter of space. There are many
useful rules and hints embodied in the front and

back of the book, tending to make bookkeeping accurate and simple,

Hygiene and Public Health. New Revised Edition. By B. Arthur Whiteligge, C. B., M. D., B. Sc. (London), F. R. C. P., D. P. H., and Geo. Newman, M. D., D. P. H., F. R. S. E. Illustrated. W. T. Keener & Co., Chicago, 1905. Cloth, \$1.75.

This little book goes quite minutely into the subject of public health and hygiene. It includes a general treatise on all those important things which so much determines the public health of a place—air, meterology, water, taking up in detail the question of good pure water and discussing the various methods of obtaining it, and the action of the mineral salts in water. The food question is thoroughly discussed—including remarks upon tubercular meat and preservation of milk. Soil, ventilation, and sewage are considered at length—then follows the disposal of the dead and measures to be taken in fighting animal

and vegetable parasites. The different infection diseases are dealt with separately and at length. The book closes with several chapters on health 1.ws—old and new, and is a credit to its author, showing a large amount of study and observation.

CLINICAL TREATISES ON THE PATHOLOGY AND THERAPY OF METABOLISM AND NUTRITION. By Dr. Carl von Noorden, Physician-in-Chief to the City Hospital, Frankfurt-on-Main. Part VII. Diabetes Mellitus. Authorized American Translation. Edited by Boordman Reed, M. D. Translated by Florence Buchanan, D. Sc. and I. Walker Hall, M. D. New York. E. B. Treat & Co., 1905. Cloth, \$1.50.

Dr. Von Noorden needs no introduction to the profession in America. He is recognized as being the foremost investigator along the lines of disorders of metabolism. He has added immensely to our field of knowledge and especially is this true with regard to diabetes mellitus. Recently he delivered a course of lectures in Bellevue Hospital Medical College and chose for his subject diabetes mellitus. Comparatively few could attend those lectures, but they are now presented to us in this little book. Thus every physician is able to procure for himself those masterful lectures at a nominal cost. Von Noorden is a forceful writer-and a master hand-and the translators have succeeded in giving us a very readable rendering of this work.

Neurotic Disorders of Childhood. By B. K. Rachford, M. D., Professor of Diseases of Children, Medical College of Ohio, Univ. of Cincinnati, etc. New York, E. B. Treat & Company, 1905. Cloth, \$2.75.

This book contains papers published by Dr. Rachford for several years in the Archives of Pediatrics entitled "Some Physiological Factors of the Neuroses of Children." To these have been added chapters on Gastro-Intestinal Toxaemias, Auto-Intoxication and Chronic Systemic Bacterial Toxaemias.

Part two deals with the individual nervous disorders, fevers, eclampsia, laryngitis, striditus, tetany, enuresis, migrane, recurrent vomiting, epilepsy, chorea, hysteria, asthma, habit, etc. Each subject is taken up separately and discussed with regard to etiology, symptomatology and treatment. The book is a well written one and fills an important place in the range of medical books.

Practical Therapeutics. Eleventh revised edition. By Hobert A. Hare, M. D., B. Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Member of the Committee of Revision of the United States Pharmacœpia of 1905. Lea Brothers & Co., Philadelphia and New York, 1905. Cloth, \$4.00.

This text book is admitted by all to be a stand-

dard. It is intended primarily for medical students, to fill the gap left by the other text books on materia medica and therapeutics. Before the advent of this book the student was left in ignorance, more or less, as to the indications for the use of drugs. That is all changed now, for this book deals mostly with the indications for the use of different remedial agents. It gives a general consideration of therapeutic measures, of the different pharmacopæial remedies and many of the newer ones not yet given a place in the U. S. Pharmacopœia, such as adrenalin, thymus gland, and thyroid extract which are very carefully described. Then comes a general consideration of remedial agents other than drugs, and lastly the treatment of the different diseased conditions arranged in alphabetical order. The present edition is certainly a valuable improvement over the older ones.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles. Edited by A. O. J. Kelley, A. M., M. D., Philadelphia. Volume III, Fifteenth Series. Philadelphia and London, J. B. Lippincott Company, 1905.

The third volume of International Clinics is well up to the standard set by the previous volumes. It is well illustrated and contains articles on such subjects as Radiotherapy, Action of Metallic Ferments of Metabolism, Serumtherapy, Mucous Colic, Ulcer of the Stomach, Addison's Disease, Parafine Injections, Poliomyelitis, Paralysis Agitans, Hemiplegia, Locomotor Ataxia, Syphilitic Necrosis, Hay Fever, etc. These articles represent the observation of some of the best men in the profession both here in America and abroad. The book is published in the form of a collaboration of papers of unusual strength and force.

CLINICAL METHODS. Ninth Edition, seventeenth thousand. By Robert Hutchinson, M. D., F. R. C. P., Assistant Physician to the London General Hospital, and Harry Rainy, M. A., F. R. C. P., Ed., F. R. S. E., Examiner in Medicine and Clinical Medicine, St. Andrew's University. Chicago, W. T. Keener & Co., Publishers, 1905. Cloth, \$2.50.

This volume of 634 pages is a very complete treatise on clinical methods, both laboratory and bedside. It gives a simple system of case taking, including history, physical examination, etc. The chapter dealing with the general appearances of the patients is a valuable one and arranged in a way to get an excellent general impression of the patient. In the chapter on auscultation of the chest are numerous useful diagrams explanatory of the different sounds, tending to make this phase of physical examination very clear indeed. The book contains also a chapter on the physical examination of children which anyone who has much work with them will appreciate. The last chapter is devoted to the composition and pre-

paration of the various clinical reagents and will be useful for the simple reason that the information contained in this chapter is usually difficult to find off-hand.

BIOGRAPHICAL CLINICS, Vol. III. The Influence of Visual Function upon Health. By George M. Gould, M. D. P. Blakiston's Sons & Co. Philadelphia. 1905.

This is volume 3 of Gould's interesting study of the probable effect of visual defects upon the lives and works of great men who have gone be-In this volume he studies the pathological manifestations in the lives of John Addington Symonds and of Taine. He draws very interesting clinical and pathological pictures and attributes the manifestations to various forms of eye defects. Other chapters are devoted to a consideration of migraine, scoliosis in school children. Slanted hand writing and its effects. Right and left predominence of either eye and its effects. Accommodation in Presbyopia, and other more or less interesting subjects bearing upon the effect of various ocular anomalies upon the general There are also two interesting chapters health. by other writers. Chapter 4 by Simeon Snell, F. R. C. S. (Edin.) is entitled, "Eye Strain as a Cause of Headache and other Neuroses." Chapter 5, Slight Errors of Refraction and Their Influence on the Nervous Symptom, is written by C. Ernest Pronger, F. R. C. S. These are both very interesting and instructive dissertations. Taken all in all one can truly say that while one cannot agree with the extreme views held by the author the books contain a vast amount of information which is interesting to the medical man and much that is instructive. The book is well bound and clearly printed with good-sized type on a paper of excellent quality. The illustrations are interesting and well executed.

#### BOOKS RECEIVED.

A Text-Book of Physiology. William H. Howell, John Hopkins University. W. B. Saunders & Company, Philadelphia, 1905.

A Manual of Diseases of Infants and Children. John Ruhrah, College of Physicians and Surgeons, Baltimore. W. B. Saunders & Company, Philadelphia, 1905.

A Treatise on Diagnostic Methods of Examination. H. Sahlu, Bern. W. B. Saunders & Company, Philadelphia, 1905.

A Treatise on Diseases of the Skin. Henry W. Stelwagon, Jefferson Medical College, W. B. Saunders & Co., Philadelphia, 1905.

Transactions of the West Virginia State Medical Association. Thirty-eighth Annual Session. Wheeling, 1905.

The Journal of Physical Therapy. A practical monthly devoted to Roentgen diagnosis, Roentgen therapy, thermotherapy, hydrotherapy, mechanicotherapy, medical gymnastics, dietetic and climatic therapy, hygiene, etc. Edited by Gustavus M. Blech, M. D., New Era Building, Chicago.

## Progress of Medical Science.

#### MEDICINE.

Modern Problems of Nutrition .- Prof. Von Noorden, Germany (Journal A. M. A., October 28), reviews the history of several of the problems of metabolism in recent years. He states that a number of problems, of interest alike to the physician and to the pathologist were left unsolved during the earlier periods of quantitative investigation, and that it is only now that, thanks to the better technic of recent times, exact methods are available for their estimation. He takes up the metabolism of energy and states that the daily food must have certain caloric values if the weight of the body shall neither increase nor diminish. With the increase of muscular work the amount of energy consumed increases in proportion. Children require a relatively high, and old people a relatively low, exchange of energy. Von Noorden emphasizes the necessity for further extended observations of the personal equation in this matter in order to provide a clear "mathematical" insight into the condition now designated by the term individuality. He referred to the experiments of Rubner and Pflueger, which tend to show that when the food contains an excessive quantity of proteids the energy exchange rises considerably above the average. He mentions briefly several experiments made by himself and his assistants, and states that among other things one important fact has been established, viz., that increase in energy exchange follows the administration of thyroid gland substance. He discusses metabolism energy in people who are run down by chronic disease or by insufficient nourishment and the energy exchange in fevers and in diabetes mellitus. He says that the exact form in which nitrogen is retained in the body is still entirely unknown and that a knowledge of this would throw some light on the changes which molecules of albumin undergo in the body. He reviews some of the work which has been done recently in physiologic chemistry, referring especially to the amino acids and to glycocol. He concludes by stating that great problems still await solution and that medical science looks to America for many enthusiastic workers in this field.

Convalescents; Their Care from the Medical Standpoint.—Lee K. Frankel says that notwithstanding the strides that have been made within the past two decades, in sanitary science, in the practice of medicine and surgery, in the betterment of living conditions, and in the general improvement in the physical status of all classes of the population, it is nevertheless a fact

that in only a few diseases has the death rate been lowered. A study of the census reports shows that while deaths from cholera infantum, diphtheria and consumption were less in 1900 than in 1890, the reverse was the case for nearly all other diseases. This state of affairs the author attributes largely to the fact that in hospital work and in private practice among the lower classes it is impossible for economic reasons to keep the patients under treatment until they are fully restored to health and strength, and in this way a large class of "half-cured" people is developed. These are in a condition of lowered vital resistance so that they easily fall a prey to serious illnesses. The remedy lies in the establishment of suitable convalescent homes, which shall not be like hospitals but shall resemble as nearly as possible the normal home. For this purpose the country is most suitable, and where land is cheap such institutions should be built on the cottage At the same time, the patient's family must be provided for in his absence, and in this connection the author speaks of the Winifred Masterson Burke Relief Foundation and the Loeb Memorial Home for Convalescents. He urges that the benevolent work of these private institutions be taken up by the State, and states that this would be the best prophylactic against disease of all sorts.-Medical Record, October 28, 1905.

A Philippine Fever.—Two cases of a somewhat temporary febrile affection suggesting typhoid or malaria and the discovery of a peculiar organism associated with it are reported by H. D. Bloombergh and J. Morgan Coffin, assistant surgeons U. S. A. (Journal A. M. A., October 28). The fever was accompanied with general malaise and in one of the cases with marked muscular pains. It started with chills, but sweats were lacking. The organism was found in the red blood cells. It is a motile hemocytozoon, approximately 2.5 microns long, 1 micron broad,unpigmented, and refractive like the malarial parasite. Its movements are of two kinds, the first depending on its rotation on one or other of its two axes and the other an independent movement from one position to another within the cell. The motion ceased after several hours observation and in specimens kept over night a few narrow ringshaped bodies were found. This parasite was probably first described by Asst. Surgeon H. M. Smith, U. S. A. (Surgeon General's Report, 1904), and the reason it has not been more generally recognized in the peculiar transient fever that occurs in some portions of the Philippines without the presence of the malarial parasite, is its small number in the blood. Smith's cases were reported under the head of estivomalarial fever, though he remarks on the peculiarities of the organism and its possible distinctness.

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#### SURGERY.

The McGraw Ligature.—A. J. Ochsner, Chicago (Journal A. M. A., October 21), reports his experience with the McGraw ligature since December, 1902, when he saw the method demonstrated by its inventor. He has used the method 156 times and has come to the following conclusions: "1. Anastomosis with the McGraw elastic ligature can be accomplished in a satisfactory way (a) between stomach and intestines; (b) between intestine and intestine. 2. The opening can be made any desired length. 3. It can be made without carrying infectious material from the lining of the stomach or intestine to the peritoneum. 4. It can be performed quickly. 5. It requires no special skill or ingenuity. 6. The patient shows very little, if any, shock after the operation. 7. The patients are relatively very free from pain, and can usually sit up in bed with the aid of a headrest a few hours after the operation. 8. The method should not be employed in making a pyloroplasty. 9. It should not be used in making a cholecystenterostomy." Ochsner quotes some of the special directions of Dr. McGraw, and has formulated the method in eleven steps as follows: 1. A round rubber cord, 2 mm. in diameter made of the best material, should be used. 2. A posterior row of Lembert sutures is applied. 3. A long straight needle, armed with the rubber ligature, is passed into the lumen of the intestine and out again at the desired distance, from 5 to 10 cm. away from the point of introduction. 4. While an assistant holds the intestine the surgeon stretches the rubber in the needle, and when quite thin draws it rapidly through the intestine. 5. The same step is repeated through the stomach. 6. A strong silk ligature is placed across and underneath the rubber ligature between the latter and the point where the stomach and the intestine come together. 7. A single tie is made in the rubber ligature after the latter has been drawn very tightly. 8. The silk ligature is passed around the ends of the rubber ligature, where they cross, and is tied securely three times. 9. The ends of the latter are released and cut off, being held by the silk ligature. 10. The Lembert suture is continued around in front until the point of its beginning is reached, where it will be tied. 11. Care must be exercised to prevent tying the rubber ligature too far backward and thus getting behind the posterior row of Lembert sutures. He mentions, as a special help in following these directions, the illustrations of the article of Dr. H. O. Walker in The Journal A. M. A., Jan. 17, 1903, p. 166. One hundred and twenty-four cases

in which this method of operating was carried out at the Augustana Hospital are tabulated and the causes of death in the fatal cases discussed.

A Plea for Local Anesthesia in the Radical Cure of Inguinal Hernia, Based on a Study of 300 Cases.-John A. Bodine has operated on 284 patients, with 300 hernias, under local anesthesia, without a death or a suppurating wound. By means of Schleich's infiltration the amount of cocaine is reduced to a minimum and limited to a small area, producing acute local anemia, effectually retaining the fluid in one spot. Cocainization of a sensory nerve trunk, abolishing pain sensation in the region supplied by it, renders it possible to operate for hernia by its use. The operative area is superficial, and the region restricted by the anatomy of the parts. In strangulated hernia local anesthesia does not increase the shock, while general anesthesia is often too great a load to be borne. The local anesthetic permits of the application of hot towels to a possibly gangrenous intestine for some time, in order to determine whether it will react. The operation does not give rise to the danger of injury to the nerve fibers. The danger to a line of deep sutures from vomiting is done away with. There is no danger of cocaine poisoning with the small dose necessary-that is, one-half grain injected intermittently throughout an hour. Morphine given after the operation would act as an antidote were The operation is more poisoning possible. thorough because of the absence of haste and the lack of need to save the patient pain. There are no evidences of pain during the operation. The cocaine solution should be made fresh. The solution is one-fifth of one per cent. for infiltration of skin and nerve trunks, and for subdermic infiltration half this strength is used. The line of skin incision should be infiltrated throughout its extent sufficiently tightly to maintain the local anesthesia for an hour. The aponeurosis of the external oblique requires no infiltration. It should be incised over the situation of the underlying ring; the ilioinguinal nerve will be exposed by retracting the flaps, and its trunk is then cocainized by a few drops of the solution. The incision may be carried painlessly into the external ring, and the flaps reflected to expose Poupart's ligament and the conjoined tendon. The iliohypogastric, if found, may now be cocainized. The margins of the internal ring are infiltrated. A line of infiltration along the long axis of hernia protrusion permits a clear cut through the hernial sac and coverings. The neck of the sac is infiltrated, dissected away from the underlying cord, ligated, and amputated. The genitocrural nerve is cocainized. The sac is dissected away from the cord, and the operation completed. Operation on the female is easier than the male.-Medical Record, October 21, 1905.

#### OPHTHALMOLOGY.

Arabian Ophthalmology.- J. Hirschberg, Berlin (Journal A. M. A., October 14), gives an interesting account of the Arabian literature on the specialty of ophthalmology. He shows that while the Greeks, their predecessors in this line, produced in the thousand years from Hippocrates to Paulos, only five works on ophthalmology, none of them by a specialist, the Arabians, in the shorter period of 500 years from 800 A. D., brought out over thirty text-books, the majority by specialists, and fourteen of which exist to-day. There were among the Arabs special divisions in general hospitals for the ocular disease and special eve clinics -institutions not to be found in Europe before the end of the eighteenth century. We are indebted to the Arabs for our descriptions and nomenclature of the anatomy of the eye, for the first attempts at solving the comparative anatomy and physiology of the organ of vision, for the first recognition of refraction, and for still other matters in which they were in advance of Western Europe by hundreds of years. The opinion of August Hirsch that the Arabs did not contribute to the progress of ophthalmology is incorrect; their contributions are remarkable and should not be ignored. They were the only masters of the specialty in medieval times.

Eye Defects Associated with the Development of Puberty.-K. Wheelock describes seven cases of defective vision occurring in boys and girls shortly before the age of puberty. They are characterized by great loss of vision, marked limitation of the visual field, and an eye ground varying from the normal to frayed blood vessels with a "shot silk" fundus, while the general health of the patient remains good. phenomena he believes are due to change in the nerves and blood stream incidental to the development of the reproductive organs, as treatment is of little avail and recovery is not complete until menstruation has been established in girls and the seminal function in boys. Points that the author particularly emphasizes are: The existence of defective vision for distance and reading, limitation of the field for form and color, the age of the patients from eight to ten years, the absence of chlorosis or hysteria, the existence of a leucocytosis, and the recovery of normal sight both for reading and distance with much contracted field. The treatment involves restoration of hemoglobin and nerve force by iron, strychnine and manganese. The author suggests that there may be some connection between this condition and chorea.—Medical Record, October 21, 1905.

The Ocular Origin of Migraine.—George M. Gould, Philadelphia (Journal A. M. A., October 28), notes the confusion that exists in regard to the conception of migraine in the literature and is especially severe on the neurologists and others who have not accepted eyestrain as its general prevailing cause. Of all atypical diseases, he says, migraine is, by all odds the leader. This is, first, because its cause, eyestrain, is of a thousand different kinds and intensities, and second, because vision is so bound up in some way with almost every physiologic activity, every psychic and bodily function, that the symptoms produced by its derangement are most multiform. The infinitely varied morbid cause or seed is planted in an infinitely varied soil. He gives the history of the eyestrain theory of its causation, and quotes from a large number of writers who have reported cures of the condition by correction of ocular defects by proper fitting of glasses. He says, "I could give the details of perhaps a thousand cases of 'migraine' or sick headache cured by glasses. I should say that 90 per cent. of cases are immediately curable, and a large proportion of the rest curable in time, and as soon as the secondary systemic functional effects have been overcome. A few cases are incurable, because these secondary effects have become organic or too chronic to allow any cure. There are also rare cases in which mental reaction has become impossible."

Iritis Tuberculosa.-W. E. Gamble and E. V. L. Brown, Chicago (Journal A. M. A., October 14), reports a case of plastic iritis producing nodules which was identifiable by a process of exclusion and still more by the tuberculin reaction, as tuberculous. The treatment was by repeated injections of Koch's tuberculin and the use of atropin continued over six months and causing disappearance of the ocular conditions. There was evidence of a tuberculous focus elsewhere, to which the eye symptoms were probably secondary, as shown by a persistent rise of afternoon temperature, slight cough and enlarged supraclavicular glands. The afternoon temperature continued after the disappearance of the eye symptoms. The authors give a detailed review of the literature of the use of tuberculin in the eye, and conclude that there is very little question of its diagnostic value. Their own experience leads them to advise the lowest possible dose on account of the profound general reaction they met with from a five mg. injection. Less can be said of its therapeutic value, but they think that many patients, like the one reported, can be helped. The article is illustrated and closes with what appears to be a rather complete bibliography.

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#### GYNECOLOGY AND OBSTETRICS.

Gynecologic Progress.—In his chairman's address before the Section on Obstetrics and Diseases of Women of the American Medical Association at its last session, Dr. C. L. Bonifield, of Cincinnati (Journal A. M. A., October 14), after first noticing some of the needs of the section, discussed several subjects of gynecology in which progress has recently been made. They are not the novelties of a decade ago; as he says recent progress has mainly consisted in appraising at their own true value procedures previously introduced to the profession. Among the subjects discussed during the year is that of retrodisplacements of the uterus, and no ideal method, he thinks, among the many proposed has yet been found. In his opinion, many patients are operated on who would be as well or better treated by painstaking non-operative methods. He favors the Alexander operation when practicable, and describes his own method. He formerly folded the ligaments covered as they are with peritoneum on themselves once or twice, and stitched with catgut. Some of his patients relapsed in six months or a year, and he had nothing but peritoneal adhesions to show for his former operations. Now he strips the ligaments of peritoneum, folds them once, stitches the folds together with chromicized catgut, pushes the folded portions through the slit in the peritoneum and stitches it to the ligaments again toward its distal end ,then closing the peritoneum. Cancer of the uterus is another subject that forces itself on the attention, and he has faith in operation based on experience which would encourage him were there no other testimony. Other subjects mentioned in the address are Dr. E. C. Dudley's operation for urinary incontinence, obstetric toxemia, vaginal Cesarean section, and 'race suicide."

Uterine Fibromata.—T. B. Eastman, Indianapolis (Journal A. M. A., October 21), argues against the probability of the harmlessness of uterine fibromata. He reviews rather extensively the literature of the degeneration of these growths and gives results of his own observations, reporting briefly six cases illustrating the difficulty of diagnosis of pathologic conditions other than the tumor itself. In one of these the patient was not even aware that she had a tumor, much less a degenerating one. He protests against the idea of waiting in these cases for the menopause to effect a cure, and thinks with the low death rate of hysterectomy and the fact that so many of these growths are undergoing dangerous pathologic changes which can not be diagnosed prior to

operation that all fibromyomata should be removed unless there are concurrent conditions rendering the operation inadvisable.

Pulmonary Tuberculosis as an Obstetrical Complication .- C. S. Bacon, Chicago (Journal A. M. A., October 7), finds that statistics indicate that probably from 24,000 to 36,000 pregnant women in the United States are tuberculous at the present time. Formerly it was held that pregnancy had a good effect on existing tuberculosis, an idea doubtless based on clinical observation, as it is observed in a few cases, at the present day, the pregnancy stimulating general nutrition and perhaps inducing a better hygiene, including more rest, etc. In many cases, however, pregnancy has undoubtedly a bad effect on the disease. It may cause its more rapid development or an acute miliary fever may appear, and nausea and vomiting or other gravidal toxemias may increase the danger. In the later stages the pressure of the uterus on the diaphragm may aggravate an already impaired respiratory function. Generally it is the puerperium that shows most markedly the evil effects. If the exhaustion of labor is severe the patient will probably die, if mild, she will go to pieces. Marriage of a tuberculous woman is not excusable; some rare exceptions, however, may be made to the rule, if pregnancy be forbidden to a tuberculous wife. If such a woman, under ideal social and hygienic conditions, with the disease not too far advanced, is extremely anxious for a child and refuses to be dissuaded, we may rightfully, he thinks, consent to care for her in her much-desired pregnancy. In all other cases the rule to forbid pregnancy is valid. In case of the tuberculous pregnant woman, the question arises whether or not to interrupt the pregnancy. The patient's circumstances will largely influence the decision. If the disease is not too far advanced and otherwise ideal conditions exist, the patient can be allowed to go to term. The proper management of labor in a consumptive involves careful watching and prompt interference as soon as signs of exhaustion appear. The management of the puerperium is also of the utmost importance. In the first forty-eight hours the greatest danger is from circulatory disturbances, later, attention must be given to the needs of nutrition and fresh air. Under no circumstances should the consumptive mother nurse her child, and it should not be kept in the same room. Puerperal tuberculosis and puerperal infection may be confused, but the history of the case ought to aid the diagnosis. complication of the two diseases is, of course, a most serious one. In conclusion, Bacon remarks on the more hopeful aspect of consumption of late years, and its bearings on this subject.

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#### NEUROLOGY.

The Etiology of Tabes: Its Social, Legal, and Therapeutic Consequences.-Feodor Von Raitz attacks the view that tabes is caused by syphilis, and points out the injustice from social, legal, and therapeutic standpoints that is caused to patients by this assumption. He says that those who accept syphilis as the cause of tabes have no difficulty in finding syphilitic evidence in everybody who has tabes. If a patient admits having had syphilis, no further proof is necessary; if syphilis is denied, every disturbance at the genitals, no matter whether it be a specific or a simple urethritis, a vulvar abscess or abrasion, a chancroid or a simple sore, is sufficient evidence of syphilis. If disturbances at the genitals are denied, then any eruption on any part of the body furnishes the proof. And if everything is denied, then the "benefit of the doubt" is used to establish syphilis, and so the hundred per cent. is accounted for and tabes stands as a postsyphilitic disease. He then contrasts the pathology of syphilis and that of tabes, to show that the lesions of the nervous system in the two conditions have nothing in common, the degenerations of the latter disease being foreign to the former. It is also absurd to believe the syphilitic virus can remain dormant, and, furthermore, if tabes were a postsyphilitic disease antisyphilitic treatment would have a curative effect, but it has been found that the reverse is the case. The author then proceeds to give his reasons for believing that tabes is the result of various etiological factors, prominent among which are sexual excess, toxins of various sorts, injury to the cord by, falls, twists, etc., and the use of mercury. A number of cases are cited to illustrate the various phases of the argument.-Medical Record, October 21, 1905.

Professional Responsibility in the Care and Diagnosis of Insanity.—Arthur C. Brush (Brooklyn, N. Y.) emphasizes the fact that it is becoming more and more imperative for the physician to detect abnormal mental processes in the young and to advice proper mental and physical means for their correction. He must be particularly conscientious in advising the family when restraint by means of commitment as an insane person is necessary, or when a committee is necessary to take charge of the affairs of a person incapable of managing either through insanity or other causes.—American Medicine, October 14, 1905.

Cephalic Tetanus.-J. H. Lloyd, Philadel-

phia (Journal A. M. A., October 7), reports a case of this rather rare variety of tetanus, in which contrary to the usual rule, the facial paralysis was bilateral. As in all other recorded cases of this kind, except one, the original inoculation wound was on the bridge of the nose. He reviews the chief facts of note in cephalic tetanus, and recapitulates briefly the other cases, seven in all, of facial diplegia in head tetanus that he has found in the literature. The peculiar fact that the same infection causes paralysis of one nerve while inducing tetanic spasm in others, is remarked, but can not be very well explained. Autopsy results, he states, are so far negative. The prognosis of head tetanus is a little better than in the usual type, but it is a grave disease with a very high mortality. Lloyd's patient came within the "chronic" group, the symptoms only appearing on the fourteenth day after the injury, and she made a good recovery. peculiarities of the case, it being the seventh or eighth thus far reported with diplegia, render it of special interest.

Central Ataxia in Childhood.—A. W. Fairbanks, Boston (Journal A. M. A., October 7), discusses the condition occasionally observed in children characterized by muscular inco-ordination, delayed voluntary muscular action, unsteady gait, slow or hesitating speech, occasionally explosive, nystagmus, tremor, involuntary movements, choreiform or otherwise, deficient energy and later paralysis, muscular spasm and contractures. Other less characteristic symptoms are vertigo, headache, optic atrophy, pupillary anomalies, various mental and sensory symptoms, trophic changes in muscles and more rarely, sphincter weakness and cutaneous trophic changes. Some of these symptoms are later than the others, and may mask the earlier symptoms of the disease. Fairbanks thinks tendon reflex anomalies are simply a matter of duration or extent of the central lesion and not essential to the symptom complex. The variations from the original type of Fredreich are remarked, and the author refers to the cases reported by Everett Smith, Nonné, Menzel and Sanger Brown as most typical and interesting of the type here discussed. In the autopsies that have been made nearly all the subjects showed extreme degeneration of the posterior parts of the cord and the posterior nerve roots were more or less degenerated in all. In all but one case there was some atrophy of the medulla and cerebellum and atrophic changes in certain of the cranial nerves. The pathology of the condition is discussed, and he points out that the latest formed portions of the cord are the seat of greatest degeneration. He thinks that the defects indicate a process supervening on a development insufficiency, either of structure or inherent vitality of the nervous system. Nonné's anomalous case there was general smallness of the entire nervous system without special signs of degeneration.

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#### BACTERIOLOGY AND PATHOLOGY.

The Identity of Variations and Modifications.-Charles E. Woodruff (Plattsburgh, N. Y.) calls attention to the fact that none of the current theories of heredity will satisfactorily explain the pathologic and anomalous conditions which the physician sees every day, but which the general biologist never studies, as he deals mostly with the healthy. The biologists are diametrically opposed to each other in some of their statements of what are apparently variations due to an inherent power of the organism to vary, while others consider all these differences to be acquired, that is, modifications due to the environment and yet transmissible. As so many of man's anomalies do not come under either definition, it is suggested that there is no difference between variations and modifications, the two classes being merely artificial classifications with no basis in fact. Each is due to causes acting either early or late, as the case may be, and each is hereditary as long as the causes last, generation to generation. Indeed, there is often no way of determining whether a given anomaly is a variation or an acquired modification. Transient heredity is the term suggested for those cases where an organism is modified for some generations and then returns to the normal. Some changes can be permanent, as when they are due to an actual chemical change in the germ protoplasm. Neither school of biologists can be right if the other is wrong, and the general trend of opinion is in the direction of considering both right, and that some missing links will cause a compromise. It is pointed out that in biologic theories of every sort, whether in the matter of heredity, the origin of variations, the origin and explanation of life, regeneration and indeed every biologic problem now discussed, there is a curious tendency to look upon living protoplasm as a complex inert chemical, having no innate powers of its own, but merely reacting to the multitude of forces impinging upon it. As it cannot vary of its own accord, it is merely modified. The constant tendency of every organism then is to be normal if it is only permitted. Herein lies the possibility of freeing society of its degenerates by finding out what causes them, and then removing the causes. The whole trend of modern thought is in this direction, not only of the students of the lower classes, but of physicians also. It is a complete overthrow of the idea that these cases are happening without cause, and it throws out much hope for the future of the race.-American Medicine, October 14 and 21, 1905.

Etiology and Prevention of Smallpox.-W. T. Councilman (Boston, Mass.) gives the results of an investigation of smallpox, undertaken by members of the Pathological Department of the Harvard Medical School. It is believed that the organism which constitutes the virus of vaccinia and smallpox is the same; that in vaccinia it undergoes a definite cycle of development, resulting in a structure, the gemmules arising from simple growth and segmentation; that in smallpox a further and more complicated cycle of development, in which probably sexual forms occur, is added to the vaccine cycle. It is only in man and in the monkey that the conditions are favorable to the development of the cycle The intranuclear which constitute smallpox. parasites are just as characteristic for smallpox as are the cytoplasmic forms for vaccinia. They are found in both variola inoculata and in variola vera. The spores which arise from the multiplication of the intranuclear bodies constitute the contagion or smallpox, which is capable of This introduced into a susair transmission. ceptible animal, develops the typic disease, smallpox, both cycles of the organism taking place in the lesions. In the nonsusceptible animal, such as the calf or rabbit, only the single, and probably esexual cycle is developed, constituting vaccine. The work which is nearing its temporary conclusion has left the fundamental questions relating to the disease unanswered. These relate to: (1) The parasite and its complete life cycle. (2) The relationship between vaccinia, variola inoculata and variola vera. (3) The mode of infection in variola vera. (4) The mode of infection in variola vera. (4) The mode of production of the exanthem. (5) The immunity, its mode of production, and the relationship between the natural and acquired immunity.-American Medicine, October 21, 1905. Coccidioidal Granuloma.—W. Ophuls, San

Francisco (Journal A. M. A., October 28), describes a condition all the cases of which, except the one from which the original description was made, have occurred in California. The parasite was first considered to be a protozoon, but later researches have proved its fungoid nature. Three new cases, in addition to the ten previously published are here reported. While it has a resemb-lance in some respects to blastomycetic dermatitis, the lesions as a rule are not confined to the skin as usually in that disease, and the clinical picture is much more complex on account of the participation of so many and various orcharacteristic nodule formation The closely resembles tubercles, and if the lungs are affected secondarily by the blood current the resemblance to miliary tuberculosis is rather strik-In its predilection for certain organs it les tuberculosis. The organism is deresembles tuberculosis. scribed and the name Oidiun coccidioides is proposed for it by the author. Synopses of previously described cases are included in the paper, which is well illustrated with figures showing the forms and the lesions produced by the parasite.

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#### THERAPEUTICS AND PHARMACY.

The Office Treatment of Diseases of the Rectum, with a Description of Some New Methods.—Charles B. Kelsey says that while radical operations under general anesthesia usually save the patient time and suffering, yet conditions are such that it is necessary to treat very many cases under local anesthesia in the office. A method he once employed for this purpose was the injection of hemorrhoids with carbolic acid, but this he abandoned years ago. For securing local anesthesia he prefers eucaine to cocaine, and he also believes that this agent is much to be preferred to the injection of simple water, for the same object, on account of the large amount of fluid required in the latter case. Local anesthesia is open to the serious objection, however, that by it the sphincters cannot be stretched without pain, on which account a very large proportion of rectal surgery is left dependent on general anesthesia. In speaking of fissure, the author says that, while not the method of choice, still almost as many cures can be effected by incising the sphincter under local anesthesia as by stretching it under gas or ether. The application of the actual cautery for pruritus is, if anything, more satisfactory if done in several sessions under local anesthesia than if but one treatment is given under general anesthesia. Fistula can sometimes be satisfactorily treated in the office, but much judgment is necessary in selecting the cases. The author also describes a new office treatment for hemorrhoids, which he has practised for some time with good results. It consists in punctate cauterization of the tumors with a needle heated by electricity, the part being first rendered insensitive by injecting a few drops of weak eucaine solution. Only one or two applications are made at a time, and the treatment should not be repeated oftener than twice a week at first. The patient is not expected to be confined to the house or kept from his ordinary business. The time consumed by the treatment in an' ordinary case is usually about three months, though it can be done in much less. The author has not observed any complications during ten years' use of the method, and he considers it a valuable procedure in cases in which, on account of the patient's timidity or for other reasons, the clamp and cautery or ligature are not used .- Medical Record, October 14, 1905.

Report on a Series of Experiments to Determine the Antitoxic Depreciation of Antidiphtheric Serum.—L. C. Layson (Detroit, Mich.) bases his article on a laboratory study of anti-

diphtheric serum representing the stock from which the market had been supplied, together with samples returned from the market, all kept under the varying conditions encountered by field antitoxin. He concludes that the antitoxic value of antidiphtheric serum is retained much longer than has hitherto been believed. The majority of diphtheric serums retain their antitoxic potency unimpaired or but slightly diminished for two, three, four or even five years, and that the maximum depreciation of the occasional serum does not exceed 33 1-3%, which contingency is guarded against in the practice prevalent with American mercantile antitoxin establishments of adding an excess of serum sufficient to cover the loss sustained by the occasional sample.—American Medicine, October 28, 1905.

The Roentgen Ray in the Treatment of Goiter is a theme discussed by Dr. L. Goerl in the Muenchener Med. Wochenschrift. The author believes that goiters should react very favorably to treatment with Roentgen rays, inasmuch as they are covered with only a thin layer of tissue, so that a large part of the active rays is able to penetrate the glandular structures, and because they contain many abnormal cells, which are easier destroyed by Roentgen rays than normal cells. He exposed eight patients afflicted with goiter to the Roentgen rays; in the first patient's case the neck diminished two inches after four exposures lasting ten minutes each; after some months the lateral enlargement had entirely disappeared. In all the other cases the neck improved in appearance, and many of the subjective symptoms disappeared. The length of time of the treatments was never greater than ten minutes, the distance was unusually ten cm., and the interval between treatments was from four days to three weeks.-Journal of Physical Therapy.

Quinin and Iron in Pneumonia.—C. F. Nieder, Geneva, N. Y. (Journal A. M. A., November 18), reports that he has treated six cases of pneumonia according to the method of Galbraith, with large doses of quinin and tincture of chlorid of iron (see Journal A. M. A., July 9, 1904, and Jan. 28, 1905), with very satisfactory results. Histories of three of the cases are given. He remarks especially the effect of this treatment on the circulation. Instead of the high-tension pulse usually present in pneumonia, the pulse was of nearly normal tension and of good volume. Cyanosis, when present, was promptly relieved.

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# The Journal of the Michigan State Medical Society

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Annual Subscription, \$2.00

Published Monthly under Direction of the Council

Single Copy, 20c

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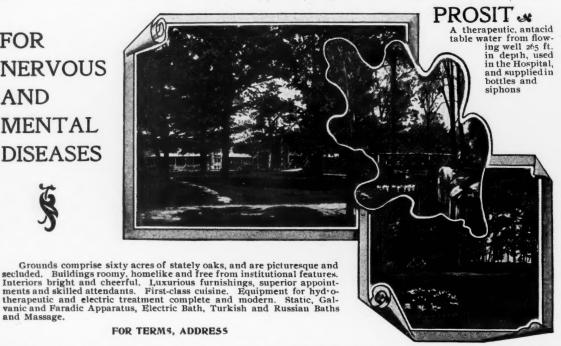
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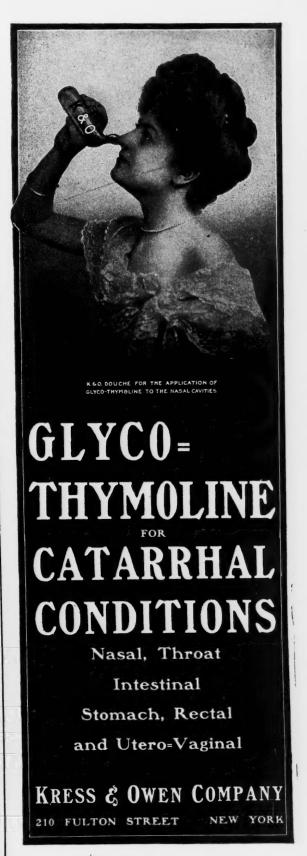
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Notice.—Information Wanted as to the Practical Lives of the Blind.—Dr. George M. Gould, 1722 Walnut street, Philadelphia, will be grateful for any trustworthy information as to the methods which have been devised by the blind in overcoming their disability or in gaining a livelihood. Accounts of such lives, anecdotes, references to literature, etc., will be appreciated.

Cough—By Francis W. Campbell, M. A., M. D., D. C. L., L. R. C. P., London, Dean and Professor of Medicine, Faculty of Medicine, University of Bishop's College.—It is not always an easy matter to decide upon the cause of a cough, and, therefore, sometimes a difficult matter to relieve or cure it. Many patients go about their work, appear in excellent health, and yet suffer more or less from a persistent irritating cough. Examination of the chest in these cases does not show anything abnormal in the respiratory murmur. Examination of the throat often reveals an elongated uvula which is frequently cured by a simple astringent gargle, and the cough disappears. Again, examination reveals congestion of the vocal cords, and a soothing inhalation of a teaspoonful of compound tincture of benzoin in a teacup of hot water frequently causes the cough to be relieved in a short time. But the general practitioner, especially during the winter or spring, meets with a great many cases of cough, the cause of which he cannot fathom. He calls it an irritating cough, but the cause of the irritation is a mystery. Experience will soon show that it is irritating to both the patient and physician. To the latter because he finds that it continues in spite of his best efforts, and at last the

#### The Advertiser.

patient drifts from one physician to another without getting relief. Eventually he takes his case in his own hands, and buys from druggists some of the numerous cough remedies they have for sale. Still no relief, and he finds his stomach thoroughly out of order because opium has been a constituent of the quack mixtures he has taken. Nature, the vis medicatrix naturae, possibly comes to his aid, the cough disappears, but no thanks to his doctor or his own prescribing. This is a brief sketch of what I know occurs to hundreds of physicians, as it certainly has to me. Among the late remedies for this class of cases is heroin, and it certainly has proved a valuable addition to our materia medica. There are many combinations in use of which heroin is the chief constituent. Some, in my opinion, are not to be recommended for general use. What is needed is a safe and efficient preparation whose action is positive and definite. Such a combination we have in glyco-heroin (Smith), made by Martin H. Smith Co., of New York, to which my attention was drawn about a year ago. Each drachm of this mixture contains heroin, gr. 1-16; ammonia hypophos., hyoscyamus, white pine bark, balsam tolu, glycerine, ad 3i. The astringent properties of white pine bark are of peculiar service in inflammations of the respiratory tract. It also is of use in arresting the night sweats of phthisis. Balsam of tolu is an aromatic stimulant, useful in chronic bronchitis or in the advanced stage of the acute disease. Altogether this mixture has, in my hands, proved to be of the greatest value, and at least a dozen of my medical friends to whom I have recommended it are loud in its praise. I give below the report of a few out of many cases in which I have used it. I may state that the first case is that of the writer.

CASE I .- F. W. C., aged 62 years, general health good. On the 23d of January, 1901, about 10 p. m., visited one of the worst fires Montreal has had for years; was exposed to great heat for about fifteen minutes, when he left to return home. Had to stand some minutes waiting for an electric car, and found that the body, which had been perspiring freely, began to feel chilly. On reaching home lighted a cigar, but before smoking half of it, was seized with a very severe rigor. Went to bed, and the rigor lasted at least twenty minutes, when it left; no perspiration followed. Passed a restless night, and, in the morning, feeling quite ill, sent for a medical friend, who found my temperature 102°, pulse 100, respiration 28, and evidence of commencing pneumonia in the

anterior part of the right lung. It is needless to follow the case minutely. Briefly, the whole anterior portion of the right lung became involved, and the inflammation extended to the hepatic peritoneum. It was a serious condition for a man of 62 years, and for several days the outlook was ominous. But a good constitution, good treatment, and splendid nursing brought about a favorable termination. There, however, remained an irritative spasmodic cough without expectoration, which was most annoying, as it disturbed sleep, and, therefore, retarded convalescence. To relieve this condition a mixture containing a couple of drops of dilute hydrocyanic acid with half a teaspoonful of paregoric was prescribed with but little relief. I then prescribed for myself, changing the mixture several times, getting some relief from day attacks, but at night the cough was bad as ever. Seeing in one of my medical journals an advertisement of Glyco-Heroin (Smith), I sent for a sample to New York, as it was not to be had in any drug store in Montreal. I soon received through the post office four ounces, and within forty-eight hours very marked relief ensued, and by the time I had used the four ounces I was almost well. Four ounces more completely cured me. I have kept a bottle of it in my house ever since, and two or three times during the year a threatened return has been promptly relieved by two or three doses of a teaspoonful, which is the proper quantity for an adult.

CASE II.-Miss A. P., about 24 years of age, has been a patient of mine all her life. For the last four or five years has every spring been attacked with a spasmodic cough which lasted from two to three months which I failed to relieve. Thinking possibly that there might be trouble in the throat, beyond my view, which might be the cause of the cough, I sent her once to Dr. Birkett, throat specialist. He reported that his examination was negative. The cough as usual continued till the weather became very warm. Last spring she consulted me for the same cough, and told me very candidly that if I failed to relieve her she would try some one else. I prescribed Glyco-Heroin (Smith), four ounces, and before she had finished it she was completely cured. She, so far this spring, has had no occasion to consult me.

Case III.—J. L. F., a physician (specialist), consulted me in August, 1891, for a hoarse spasmodic cough, which was most aggravating both by night and day. He feared whooping cough, as his sister's children, who resided in the same



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ALLEGANMonthlyThird ThursdayDecember 16, 1905
ALPENA Worth!
BARRY
ARENAC Quarterly First Wednesday of March, June, September, December
10SCO
BECKELEN. Monthly Third Thursday (Ign to Dec except July and Aug.) December at room
BRANCH Quarterly.  CALHOUN. Quarterly First or second Tuesday of Mar., June, Sept., Dec December 12, 1905 CASS. Quarterly Last Thursday of March, June, Sept. and Dec September 28, 1905
CHARLEVOIX
CHEBOYGAN Monthly First Tuesday weather permitting Ianuary 2 1006
CHIPPEWA
CLINTON Monthly First Thursday. October 5, 1905 DELTA Monthly Second Tresday Sept to June December 1905
DICKINSON-IRON Bi-monthly Second Tuesday of Feb., April, June, Aug., Oct., Dec. 12, 1905 EATON Quarterly Last Thursday of Jan., April, July, Oct. Oct. 26, 1905 EMMET Monthly Second Tuesday (except July, August and Sept.) January 9, 1906 GENESEE Quarterly Fourth Tuesday of Jan., April, July, Oct. October 24, 1905
GOGEBIC Monthly Second Tuesday December 12, 1905 GRAND TRAVERSE Monthly First Wednesday December 6, 1905
GRATIOT
HOUGHTON
ONTONAGON Quarterly Second Monday of Jan., April, July, Oct October 9, 1905
INGHAM Bi-monthly Second Thursday of Jan., Mar., May, July, Sept., Nov November 9, 1905 IONIA Quarterly First Thursday of Mar., June, Sept. and Dec December 7, 1905
ISABELLA
JACKSON Quarterly First Thursday of Mar., June, Sept., Dec December 7, 1905  KALAMAZOO Quarterly Second Tuesday of March, June, Sept., Dec December 12, 1905
KENT Semi-monthly Second and Fourth Wednesdays (except July and Aug.) Dec. 13, 1905 LAPEER. Quarterly Second Wednesday of Jan., April, July, Oct
MACOMB Semi-annually Second Thursday of May and Oct January 26, 1905
MARQUETTE. December 1, 1905
ATORD Monthly December 12, 1905
MASONMonthly.First TuesdayOctober 3, 1905MECOSTAQuarterlyFirst Friday of Jan., April, July, OctOctober 6, 1905MENOMINEEBi-monthlySecond Tuesday of Feb., April, June, Aug., Oct., Dec.Dec. 12, 1905MIDLANDMonthlyThird WednesdayDecember 20, 1905MONROE.QuarterlyThird Thursday of Jan., April, July, OctOctober 19, 1905
MONTCALM Ouarterly Second Thursday of Ian., April, July, Oct October 12, 1905
MUSKEGON Quarterly First Friday of March, June, Sept., Dec. December 1, 1905  NEWAYGO Quarterly First Thursday of Jan., April, July, Oct.
OAKLAND Quarterly Second Tuesday of March, June, Sept., Dec September 12, 1905 O., M., C., O., R., O
MONTMORENCY
CRAWFORD
OCITAMA TIP
LAKE
OSCEOLA  OSCEOLA  LAKE  Bi-monthly  May, July, Sept. and Nov.  OTTAWA  Ouarterly  Second Tuesday of Jan., April, July, Oct.  October 10, 1905  SAGINAW  Quarterly  First Wednesday of Jan., April, July, Oct.  October 1, 1905  SAGINAW  Quarterly  First Tuesday of Feb., May, Oct., Dec.  October 3, 1905  SANILAC  Quarterly  First Monday of Mar., June, Sept., Dec.  December 4, 1905  SCHOOLCRAFT  Monthly  Last Wednesday  October 31, 1906  SCHOOLCRAFT  Monthly  First Tuesday  December 5, 1905
ST. CLAIR Bi-weekly Every alternate Thursday after Sept. 1st to May 15 December 14, 1905
ST. JOSEPH Quarterly Second Tuesday of April, June, Sept., Dec December 12, 1905 TRI-COUNTY Western Wednesday starting with Sept Quarterly October 4 years
MISSAUKEE
TUSCOLA Quarterly Second Monday of Jan., April, July, Oct. October 9, 1905 VAN BUREN Quarterly Second Thursday of March, June, Sept. Dec. December 14, 1905 WASHTRNAW Four times a y'r Second Tuesday of March, May, Oct. Dec. May, 1906 WAYNE Weekly Monday (except June, July and Aug.) May, 1906
waxingweekiymonday (except june, july and Aug.)



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house, were all down with the disease. I prescribed for him four ounces of Glyco-Heroin (Smith). Within a few days he reported to me that he was fifty per cent. better. I think that he repeated the same quantity twice, by which time he was practically cured.

CASE IV.-F. I. B., aged 58 years, an old soldier, now employed as watchman in a safe deposit company. Has been a patient of mine for the last 18 years. Is asthmatic, but the attacks are not frequent. Has had repeated severe attacks of acute bronchitis. In December, 1901, sent for me-diagnosis, acute bronchitis. Bronchial râles all over, anterior and posterior chest. Cough severe, expectoration characteristic. Ordered croton oil liniment to chest, front and back, and gave a mixture of vin ipecac, vin antimon,, tinct. of aconite, and syrup of squills. For five days this treatment was followed without the slightest improvement to any of the symptoms. I then prescribed Glyco-Heroin. The following day when I made my visit the patient exclaimed on my entering the room: "Doctor, why did you not

give me that medicine before? It has given me immense relief." And so it had; the cough was greatly diminished; the expectoration much less. Before he had finished a second four ounces I allowed him out of bed, for he was practically convalescent.

Epilepsy.-Two remedies have been recently introduced for the treatment of epilepsy. One of these is verbenin, which has been highly recommended by a number of clinicians; especially in cases of gastrointestinal irritation from worms or other causes. The other is solanine, the alkaloid of the horse-nettle. This plant has attracted a great deal of attention, as a remedy for the nervous irritability which renders the epileptic more liable than ordinary persons to suffer from these explosions. The crude plant preparations are too variable for anything like definite results. but their use has shown the remedy to be of undoubted value. The Abbott Alkaloidal Co. presents the pure alkaloid in granule form; and verbenin as a purified extract, the best preparation as yet attainable.

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#### FISCAL YEAR AND DUES

The fiscal year of the Michigan State Medical Society is from January I to December 31. The Secretaries of the County Societies are requested to forward the dues of the members to the Secretary of the State Society as soon after the annual meeting of the respective County Societies as possible, and of the new members as soon as received. The dues cover the subscription to the JOURNAL.

#### ANONYMOUS COMMUNICATIONS

Anonymous communications, whether for publication, for information, or in the way of criticism, are not considered

#### NEWS

Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to the medical profession of the State. We shall be glad to know the name of the sender in every instance. The last forms of the JOURNAL are closed on the 15th of the month and all matter must be in before that time to appear in the current issue.

#### ORIGINAL PAPERS

Articles are accepted for publication with the understanding that they are contributed solely to this JOURNAL.

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It will be satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great to the editor and printer. We can not promise to return unused manuscript.

#### **ILLUSTRATIONS**

Half-tones, zinc etchings and other illustrations will be furnished by the JOURNAL when photographs or drawings are supplied by the author.

#### ADVERTISEMENTS

Advertising forms go to press eight days in advance of the date of issue. Therefore, in sending in copy, time should be allowed for setting up advertisements and for the sending and return of proofs. Advertising rates will be made known on request to the Editor.

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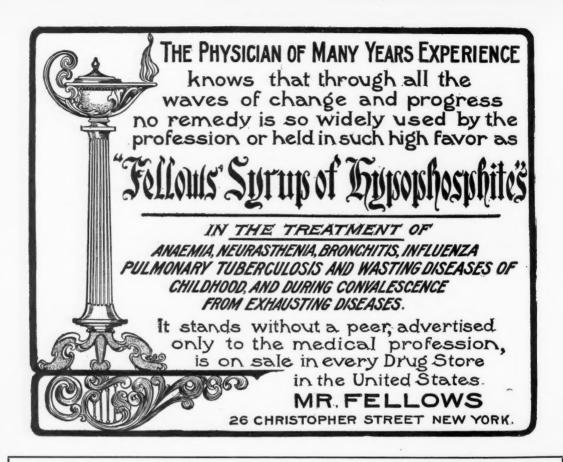
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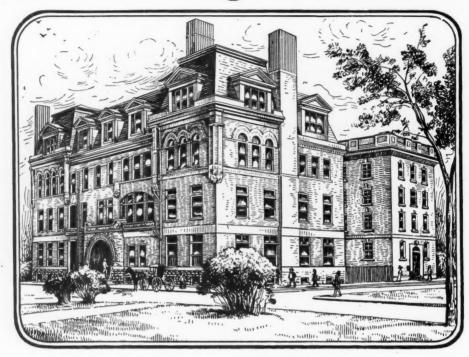
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H. O. WALKER, M. D., Sec'y, DETROIT, MICH.

